

# GREENBOOK

## A Guide to Intelligent Giving

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### *Funding Environmental Stewardship in Israel*

WRITTEN BY AMIT ASHKENAZY  
& TZRUYA CALVÃO CHEBACH



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Greenbooks are research reports written specifically for the funding community. Each unbiased, comprehensive guide focuses on a problem currently facing the Jewish community, maps out the relevant history, and details a wide range of approaches being taken to address the problem. Greenbooks are produced by the Jewish Funders Network, with a target publication of two guides annually. Greenbooks are available for download at [www.jfunders.org/Greenbooks](http://www.jfunders.org/Greenbooks).



**For all of its geographical beauty and diversity,** Israel is beset by constant pressure to safeguard its environment. How best to do so raises critical questions about the country's evolving relationship to sustainability and social justice.

Over the past two decades, philanthropic foundations—in partnership with civil society—have been instrumental in forging a vision of social environmental change in Israel, and in dramatically raising public awareness of environmental concerns.

Looking at the emerging social environmental field today, it is clear that investing in the environment is no longer about nature conservation alone, but more broadly about investing in social justice, equality, education, and societal-environmental health. This shift has opened up wide channels in philanthropic potential. To mention just a few:

- ▶ Environmental concerns bring together people from a wide spectrum of Israeli society: Jews and Arabs, religious and secular, wealthy and poor, young and old. Addressing those concerns, therefore, can serve to bridge gaps in Israeli society.
- ▶ Since many environmental issues involve cross-border aspects, they offer an opportunity to act on a regional level and to weave ties with Israel's neighbors.
- ▶ Environmental issues offer unique opportunities for constructive collaboration between funders, NGOs, and leaders in the public sector and private sector alike. In fact, much of the work already accomplished has depended on such collaborations that leverage collective wisdom and creative funding to create change.
- ▶ Israel's small size presents both a challenge and an opportunity. On the one hand, its environment is vulnerable and fragile. On the other, even small changes can make a big difference. For these reasons, the environmental field offers a uniquely wide breadth of funding opportunities, from small grassroots grants to projects on a national scale. This allows all funders to find their suitable point of entry and level of giving.

The key to harnessing the powerful philanthropic potential in this field is to plan your investment wisely, to be creative and knowledgeable, and to develop a holistic approach to your funding. We at JFN are here to help you with precisely that. To that end, this Greenbook aims to serve as a guide to help you:

- ▶ Learn from the failures and successes of the past two decades of funding initiatives
- ▶ Collaborate effectively
- ▶ Take calculated risks
- ▶ Pose the right sorts of questions to the right people
- ▶ Reach out to experienced professionals in the field, both in Israel and elsewhere
- ▶ Use Israel as a testing ground for global projects in this field
- ▶ Import best practices from other countries to Israel

Although philanthropy in this field is relatively young, it has already made significant change in building a field and creating a movement. In that sense, this Greenbook couldn't be more timely. There is an increasingly urgent sense that we cannot afford to wait until the other challenges Israel is facing are solved before we give attention to the environment. We need to act now to ensure there is an environmental tomorrow. Now is the time to support environmental change in Israel. Never has the Israeli public been as primed to act. As calls for social justice, sustainable planning, and a higher quality of living grow ever louder, philanthropists are uniquely positioned to shape Israel's today and tomorrow.

**So as you consider your involvement in this unique field at this unique time, we hope you will find our resources and expertise helpful.**

*Jewish Funders Network, June 2015*

# Preface

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When we speak of Israel, we might see in our mind's eye a pastoral Middle-Eastern landscape of olive trees, orange groves, and sunny shores. We might think of the country's natural wonders and historic sites, and of places regarded as holy for billions around the world. For the people who live in Israel today it is certainly all this, but there is another reality they experience that is generally overlooked by those who invest in Israel's future. Since the country's birth, its rapid development has created enormous pressures on natural resources, produced health problems that threaten thousands of lives every year, and has given rise to economic enterprises that adversely affect human and environmental health. In response to these challenges, a vibrant, yet fragile, social movement now works to protect the environment, and to create a more sustainable Israel for all its inhabitants.

This Greenbook will suggest that funding environmental stewardship in Israel is not just critical in its own right but also affords an ideal way to systemically address problems that transcend religious identities, social divisions and partisan affiliations. Pollution, after all, does not respect borders. Everyone deserves a flourishing neighborhood to live in, clean water to drink, and healthy ecosystems that both support human well-being and strengthen the economy. Indeed, the environmental movement in Israel brings together Arabs and Jews, people from Tel Aviv and the periphery, and politicians from all parties in a joint effort to create a safer, more sustainable state.

Drawing from the experience of environmental activists, researchers, funders, government officials and lawmakers, this Greenbook outlines the scope of environmental challenges in Israel and introduces the many types of initiatives which are changing the way Israeli citizens and officials relate to the environment. First, we will provide an overview of the environmental movement in Israel and chart the main paths for environmental change in the country. Then we focus on specific topics that lie at the heart of environmental efforts in Israel: conserving natural heritage, creating flourishing city environments, protecting environmental and human health, addressing environmental justice, and finally, new prospects for environmental innovation.

While the Greenbook refrains from recommending funding for any particular organization or initiative, it often refers to relevant articles and websites that elaborate on the examples discussed. Given the subject matter, many links lead to material in Hebrew, though English versions of the text are used whenever possible. Furthermore, the JFN can provide additional information and resources to help deepen your understanding of the topics presented, and to reach the initiatives that best reflect your funding priorities and strategies.

We hope you find this Greenbook useful, and join the circle of giving for environmental change in Israel.

*Amit Ashkenazy, Tzruya Calvão Chebach, and the Jewish Funders Network*

# How to read this book

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The Greenbook may be read either from cover to cover or as a collection of independent chapters. We recommend starting with *Chapter One*, which provides a detailed description of the environmental movement in Israel, and of the local funding arena. Each of the chapters in the Greenbook will present specific suggestions for funders, related to their respective themes. Throughout, we offer links and citations to background information and further research. Because these resources are linked directly in the digital versions of this book, you may find that reading the digital version offers a more versatile experience than the print version.

Reference to particular organizations and institutions does not imply endorsement. There are far too many, and the landscape is too fluid, to allow us to identify particular organizations, programs or individuals in any comprehensive way. Rather, we hope that funders will use the information contained here to engage more deeply with the field and explore opportunities for funding in areas that reflect their interests and values.

In order to stimulate productive conversations among funders, each chapter is followed by Questions to consider. For suggestions on how to use these questions, see the chapter at the end of the Greenbook entitled, *Ways to Use this Greenbook with Other Funders*.

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In this Greenbook, phrases and titles in **bold blue** offer hyperlinks to an external source, while those in *blue italics* link to cross-references elsewhere in the Greenbook itself.

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# 1 Understanding Environmental Change in Israel

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## THE ENVIRONMENTAL MOVEMENT IN ISRAEL

### How has the movement evolved?

In various forms, a commitment to safeguarding the environment for future generations informed Israel since its founding. It is customary to describe the evolution of the environmental movement in Israel, as elsewhere, in three waves:

The first wave focused on preserving “nature” as a pristine reserve where “development” is excluded. Accompanied by this romantic view of the land, this gave birth to widespread national campaigns for the protection of wild flowers, and to the incorporation of activities that connect children to nature within the education system. It also facilitated the establishment of the Society for the Protection of Nature in Israel, to this day one of the largest environmental organizations in the country.

Despite its popular support, in the 1950’s and 1960’s this approach came up against the country’s ideological drive toward modernization and “making the desert bloom.” As a result, environmental considerations were always seen as impediments to development. Furthermore, while the first wave of environmentalism in Israel had a lot to say about what goes on within the reserve, or the space that had been freed from human intervention, it gave little thought to other spaces where citizens live and interact.

In contrast to the first wave of environmentalism in Israel, which was eco-centric (centered on nature), the second wave was anthropocentric (centered on human beings). It marshalled scientific methods and data to demonstrate how air and water pollution, as well as solid and toxic waste, can harm us. This was the ethos adopted by the newly founded “service for environmental quality,” which subsequently became today’s Ministry of Environmental Protection. This shift in approach affected civil society as well, with the emergence of the Israel Union for Environmental Defense (Adam Teva Vadin) in 1991 – Israel’s first organization to use legal advocacy, jurisprudence, and scientific reasoning to combat pollution and environmental hazards.

The third wave of environmentalism in Israel, incorporating elements from the first two, goes much further. It no longer sufficed to preserve secluded reserves or safeguard individual health. It identified both the economic costs behind harmful phenomena such as pollution, and the groups that disproportionately bear those costs. It also shed light on those who benefit from environmental harm, and the interests with which environmental organizations must contend. In other words, it linked environmental agendas with social justice agendas. Thus, it allowed environmental organizations to relocate their struggle to more effective fields of operation, address fundamental social problems, and appeal to ever expanding circles of groups and individuals. The third wave of environmentalism also transitioned from a solely oppositionist standpoint to a more constructive strategy focused on new models of development. Instead of opposing development altogether, it could now weigh different kinds of development according to social-environmental measures.



In a global perspective, this transition corresponds to the wide acceptance of the concept of sustainable development, first defined in the [United Nation's Bruntland Commission report](#).

### **Sustainability can be defined through three key points:**

1. The needs of future generations should be granted equal standing in considering current environmental dilemmas.
2. Governments, communities, and corporations must avoid shifting environmental burdens to places where regulation is weaker or residents are less able to express their opposition.
3. All decisions must take into account environmental, social, and economic factors.

### **What makes this an environmental movement?**

As environmental analysis and action evolved, a multitude of environmental organizations and voices emerged. The environmental movement in Israel is composed of over a hundred organizations and thousands of activists, spread throughout the country. Some address local issues, while others are national in their goals and characters. Some focus on specific issues such as transportation, nature preservation or energy, while others work to promote a broad range of environmental causes. In fact, some of the values within the movement conflict with one another, and as in any movement, the interests of individual organizations do not always align. The movement's parts do not always share a joint vision for action and progress. Yet certain consistent features allow us to speak about an "environmental movement" as a coherent force in Israeli society and politics:

- ▶ Most organizations are members of an umbrella body called [Life and Environment](#) (130 organizations as of May 2015). This association works to coordinate its members' stands on legislation, policy, and matters of pressing concern. It also assigns representatives from environmental organizations to statutory committees that carry an overwhelming influence over strategic decisions as well as on local plans.
- ▶ Although each group has its own set of values and priorities, environmental organizations in Israel have an overall common ideology and language, and over the years have learned to work together to promote common goals through broad coalitions—both with each other and with non-environmental organizations.
- ▶ Environmental organizations in Israel often share expertise and resources, and build on one another's accumulated experience, while allowing each organization to thrive on its own terms. They have multiple arenas for socialization, both in physical shared spaces and in networks of fellowships, alumni, and ongoing activity. The diversity of small, medium, and large organizations networked together support one another through capacity building, joint projects, and cooperation in organizing for joint purposes. This ability to work together manifested in several large scale campaigns which resulted in local and [national accomplishments](#), such as [the campaign against the privatization of land in Israel](#), [the campaign for a sustainable allocation of the natural gas recently discovered off the coast of Israel](#), and [the campaign to save the ecosystems of Israel's Mediterranean beaches](#) from irreversible damage from projects that do not comply with current planning law and practices.

Larger organizations within the movement have lobbyists representing their views in the Knesset (the Israeli parliament). This allows for consistent and direct interaction between Knesset members and representatives of various voices in the movement. Enabling the movement to translate its shared goals into actionable policies was an active effort that benefited significantly from support by funders.

## WHAT IS THE PROFILE OF ENVIRONMENTAL ORGANIZATIONS IN ISRAEL?

In 2011, Alon Tal, author of the most extensive historical description of the environmental movement in Israel, led a group effort to map its current needs and trends and provide recommendations for funders. [The report](#), titled "Israel's Environmental Movement: Trends, Needs and Potential", relied on surveys, interviews, and public hearings with environmentalists. While extremely useful, the report does not reflect the far-reaching changes in funding that have occurred since, or their implications for organizations' survivability. Here are some of the most relevant results from the report:

- ▶ **When founded:** Of the 97 organizations that participated in the survey, 46 percent were established during the first decade of the 2000's. Most others were established only in the 1990's.
- ▶ **Why founded:** Some 45 percent of the organizations surveyed were founded in response to a specific problem or initiative (reactive). The remaining 55 percent aimed at promoting an idea or conducting environmental activity in a formalized setting (proactive).
- ▶ **Purpose:** Some concerns are addressed by a large number of organizations, such as environmental planning, [open space conservation](#), [environmental health](#), [nature and biodiversity conservation](#), [sustainability](#), democracy and public participation, [pollution and toxic substances](#). Others topics, however, are not dealt with as extensively, including desertification<sup>1</sup>, [over-population](#), soil drift, [fair trade](#), and [agricultural impact on biodiversity](#).
- ▶ **Size:** The number of active or dues-paying members per organization ranged at the time of the survey from less than 20 in most cases to several thousand in a few.
- ▶ **Strategy:** The most frequent action strategy begins with [education and community work](#), followed by [creating physical projects and pilot programs](#), [appealing to the government and the Knesset](#), [social activism](#), [media work](#), [using planning tools](#), [litigation](#), [leadership development](#), and finally [data collection](#). According to the report, organizations did not make sufficient use of risk assessment and analysis of economic surveys, though their use has since grown.
- ▶ **Collaboration:** 61 percent of the organizations reported that they collaborate with other organizations or coalitions to promote their agenda. Respondents mentioned 43 ad-hoc environmental coalitions all together.
- ▶ **Geographical focus:** 53 percent of the organizations reported that they operate on a regional or national level, while 40 percent act on a local level. In Israel, however, the distinction between local and national is somewhat blurred. Our own interviews affirmed that local issues such as beach

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1 "The United Nations Convention to Combat Desertification defines the term desertification as 'land degradation in arid, semi-arid and sub-humid areas resulting from various factors including climatic variations and human activities' (UNCCD Art.1.a)." from: <http://www.unesco.org/mab/doc/ekocd/chapter1.html>

conservation often become national policy items, and national policy affects local communities.

## THE ENVIRONMENTAL FUNDING LANDSCAPE

Philanthropy has played a crucial part in many of the environmental movement's victories. Some examples include:

- ▶ The [Beracha Foundation's](#) creative work on the Ariel Sharon Park transformed the former landfill into one of the Dan region's largest active open spaces.
- ▶ The [Porter Fund](#) created the [Porter School of Environmental Studies](#), which enriched Israel's environmental conversation by exposing it to leading international trends, and created a cadre of academically trained environmentalists.
- ▶ The [Richard and Rhoda Goldman Fund](#) focused for ten years on developing an environmental movement, building the breadth and strength of organizations, activists and public exposure using a wide gamut of philanthropic tools, including many seed grants and several long-term capacity-building grants. In the succeeding five years, until its closing in 2012, the fund broadened its scope to add issue areas, such as new standards for solid waste management.
- ▶ The Sheli Fund's small-grant pool seeded grassroots projects across the country from 1997 until 2013. Its micro-grants presented a unique source of funding for grassroots initiatives all around the country.
- ▶ [Yad HaNadiv](#) has played a great role in putting important issues on the national agenda. One example is its initiative to ensure adequate conservation of the ecosystem in the Mediterranean Sea and to curb the degradation of Israel's marine environment.
- ▶ The Samuel Sebba Charitable Trust, working on environment among other topics, was a senior partner in the Green Environment Fund (see below), promoting environmental movement building in Israel, and encouraging greater linkage between environmental and social justice.
- ▶ The [Environment and Health Fund \(EHF\)](#) has improved expertise in, and expanded knowledge about, environment and health in Israel, with the ultimate goal of improving human health and well-being.
- ▶ The [Green Environment Fund](#) played an essential role in building the environmental movement through networking, capacity buildings, and supporting the movement's leadership until its [closure in 2014](#). It demonstrated that collaboration between funders can encourage cooperation within the movement.

Over the past five years, however, environmental organizations in Israel have suffered serious setbacks, as several major foundations ceased their funding either in Israel in general or specifically to environmental causes. Chief among them is the Green Environment Fund (GEF), which brought together the [New Israel Fund](#), [Nathan Cummings Foundation](#), the [Andrea and Charles Bronfman Philanthropies](#), the Samuel Sebba Charitable Trust, and the Morningstar Foundation (as well as the [Dorot Foundation](#) and the Australian Pratt Foundation for several years). According to a survey conducted in 2010 ([Greenspan, 2014](#)), considered to be a peak year for environmental funding, the GEF gave to 34 percent of environmental organizations

in Israel (participating in the survey), totalling \$14 million. Its micro-grant program, the Sheli Fund, gave to 26 percent of organizations, for a total of \$2 million over its 17 years of operation. Their exit from the environmental funding arena at the end of 2014 created a financial and leadership gap that is expected to dramatically affect environmental organizations' operational budgets, and create an immediate need for new sources of funding.

The 2010 survey demonstrates that at the peak of funding, philanthropic foundations' support accounted for, on average, 41 percent of the total budget of environmental organizations, and individual funders' support accounted for an additional 12 percent. *Besides amplifying the risk that organizations would adapt their priorities to fit their benefactors' interests, this dependence ultimately made organizations vulnerable to external shocks that adversely impacted the field, including the financial crisis and shifts in funding priorities.*

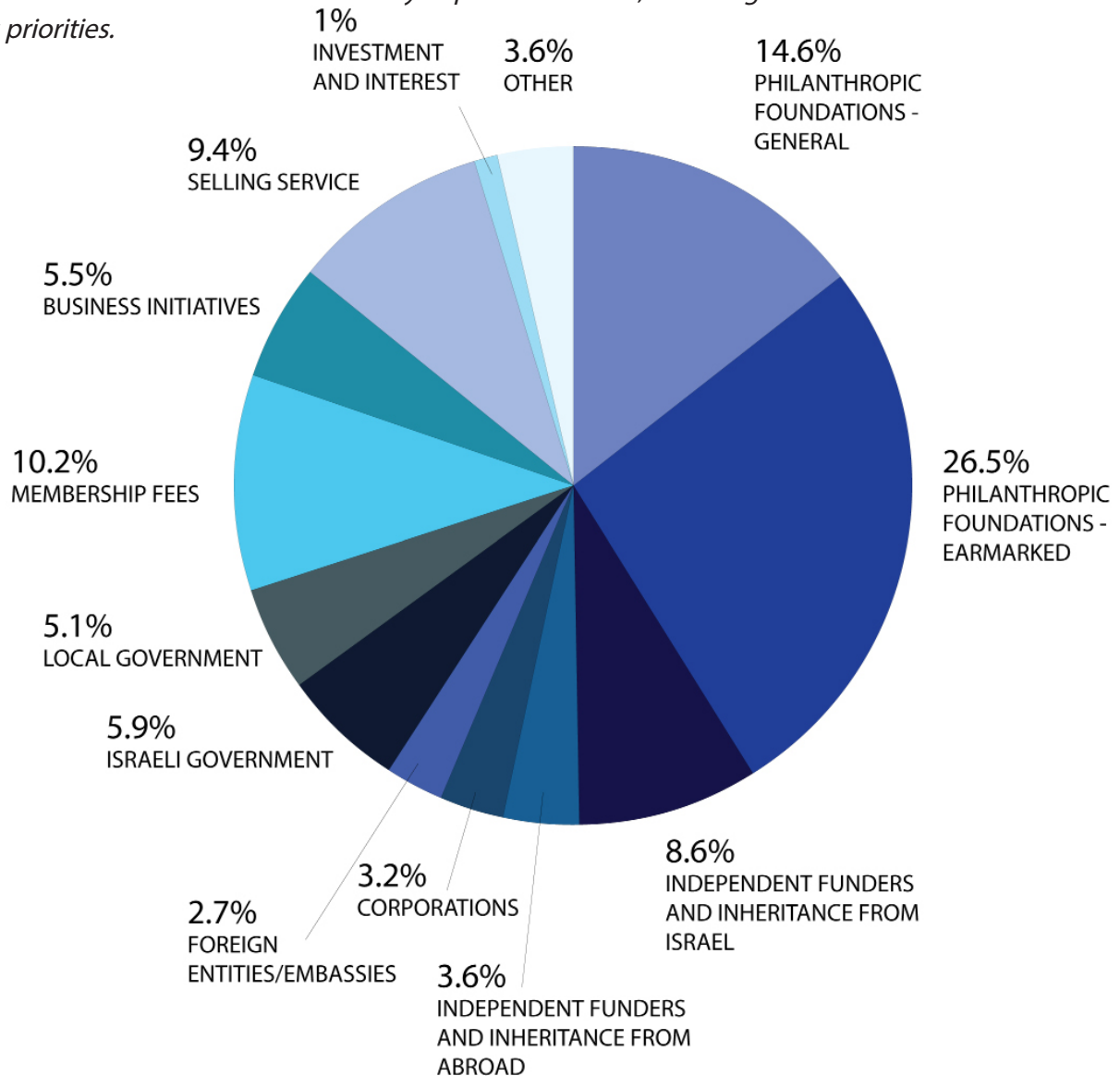


Figure 1. Sources of Funding for Environmental Organizations with Budgets in 2010, Greenspan, 2014

One possible path for revenue diversification is to engage with the Ministry of Environmental Protection and other agencies that have expressed a willingness to match funds that support environmental organizations. Public-private partnerships of this sort have been in place in two main forms: direct funding from government sources (fee for service) and joint funding (*meizam meshutaf*). Both require building bridges between environmental organizations and government agencies, but could potentially increase the impact of funding even further.

*Collaborations between funders, environmental organizations and the business sector have also taken place, and represent further potential for diversification.*

Such collaborations pose both practical and ethical questions. On the practical plane, conflicts of interests between environmental organizations and businesses may hinder funding. Ethically, environmental organizations must avoid “greenwashing” polluters, or lending a company environmental legitimacy in exchange for funding or donations. Accepting government funding may also present potential conflicts as it may blunt advocacy efforts, though that is highly dependent on the identity of the funding agency.

## PATHWAYS TO ENVIRONMENTAL CHANGE

### National legislation

In Israel, laws are set at three levels: at the Knesset; in government ministries (regulations); and in municipalities (local codes). The first decade of the 2000’s marked a revolution in Israel’s environmental legislation. In a relatively short span, the Knesset passed landmark bills such as the [Clean Air Act](#), the [Polluter Pays Act](#), and the Environmental Enforcement Act. It restructured the entire legal mechanism concerning waste, mandating levies on landfilling, and regulated the recycling of tires, electronic waste, and packaging materials. It also expanded the bottle deposit scheme.

One of the reasons for these legislative successes is that the environment in Israel is regarded as a non-partisan issue. That is not to say that environmental legislation is apolitical per se – it deals with existing power structures, budget allocations, and deeply engrained norms. But the Israeli political system is predominantly focused on one main axis: the Israeli-Arab conflict. Thus, *there is no explicit left or right stance regarding environmental regulation, climate change, the role of the Environmental Protection Ministry, or environmental taxes.*

On the other hand, the depoliticized nature of the environment in Israel carries disadvantages as well: most parties do not place environmental issues high on their platforms or legislative portfolios. That leaves the initiative in the hands of individual Knesset members who are personally involved and committed to environmental causes, or governmental officials interested in facilitating environmental change, for example in the Ministries of Environmental Protection, National Infrastructure, Energy & Water Resources, Economy, and Transport. Furthermore, implementing the legislation is a challenge in its own right, that may be affected by commercial interests and a reluctance to burden certain companies with substantial fines.

Despite the fact that legislation usually takes several years to pass, a number of internal factors can facilitate passing environmental legislation: first, over the years the Knesset Committee for Internal Affairs

and Environmental Protection has enjoyed the leadership of environmentally friendly chairs and a highly qualified and environmentally-minded legal and professional staff. Second, the Social-Environmental Caucus has traditionally been the largest caucus in the Knesset. It usually appeals to Knesset members from all parties, both coalition and opposition. Although it has no statutory authority it can hold independent hearings, conferences, and tours that raise awareness among Knesset members and shine a media spotlight on environmental issues and legislative initiatives. For example, every year the Knesset marks [International Environment Day](#) by holding hearings on environmental topics in each of the Knesset committees, and by voting on environmental bills in the Knesset's assembly. The day's high media profile often encourages the government to support dedicated environmental legislation packages initiated by the Caucus.

## Working with government ministries

Ministries are important agents for change on causes in the environmental field – from writing and implementing codes and regulations to cancelling harmful subsidies to promoting environmental programs and budgets. The [Ministry of Environmental Protection](#) promotes environmental needs and initiatives from within the government, however many environmental issues are managed across several different ministries. For example, water quality (potable water sources, rivers, Kineret/Sea of Galilee, etc.) is managed by the Water Authority, Ministry of National Infrastructure, Energy and Water Resources, Ministry of Health, and the Ministry of Environmental Protection.

The fact that so many ministries are involved with environmental decision making may lead to fragmentation in the development of environmental regulatory frameworks. On the other hand, environmental policy leaders also identify a great potential in the institutional diversity relating to the environment, and are trying to enable officials in each of the ministries to develop a sense of ownership for environmental issues relating to their respective areas of work. One early example of this effort is the promotion of the [2003 government decision on a strategic plan for sustainable development in Israel](#), requiring each ministry to submit and implement an environmental action plan. Throughout this Greenbook we will offer examples of ways the environmental movement engages with government ministries.

## Influencing local government

Local government in Israel remains highly dependent on the central government. But municipalities sometimes use their statutory power to resist governmental efforts, even efforts backed by the environmental movement. Thus, to drive environmental change in towns and cities often requires bridging between divergent authorities and responsibilities; those with responsibility may not have authority, and those with authority may be unaccountable. Mayoral power presents another challenge to driving local environmental change: In the 1980's, Israel changed the law to grant more political power to the local executive branch, meaning the mayor. Today, mayors in Israel seldom contend with a forceful opposition. This kind of power structure has presented an obstacle for several environmental campaigns in the past, though they have also demonstrated that mayors are susceptible to local opinion and activism.

Local government can also serve as an important ally in itself. Several organizations represent the interests of mayors and municipalities, namely the [Foundation of Local Authorities in Israel](#), the [Center of Regional](#)

Councils, and the [Forum 15: The Israeli Forum for Self-Government Cities](#). The latter, representing Israel's 15 largest cities, has environmental advisors working with the government and local member cities to promote environmental goals and strategies. One example is the forum's [Convention for Reducing Air Pollution and for Climate Protection](#). Environmental organizations have identified the potential to change policies on the local arena, and have initiated campaigns in between and [during election cycles](#) to influence municipal agenda.

There has been growing interest to promote environmental work in local politics, backed in the past two local elections by surveys that demonstrate the importance voters attribute to environmental issues. Through targeted campaigns, the environmental movement and local initiatives tried to promote environmental agendas in local elections, and give support to environmentally friendly mayors and city council members.<sup>2</sup> Furthermore, one of the environmental movement's noticeable accomplishments was its success in passing a bill that requires each municipality to have representatives of environmental organizations in the municipal environmental committee. The movement put time and effort into [building these committees](#) and training representatives to be able to defend the public interest in environmental matters. Local environmental groups' representatives are also entitled to be its members.

### Participation in statutory committees

In 2002, the Knesset approved a bill that mandates representation of environmental organizations' [representatives](#) in national and regional planning committees, including the committee for the protection of the coastal environment and the committee for national infrastructure. Given that such committees serve as the final step in approving large-scale projects, the movement's ability to take part and vote in committee discussions is crucial.

### Environmental litigation

As Israel's environmental legislation framework has evolved, the courts have become an increasingly effective tool for defending social-environmental rights and preventing violations of environmental law. The [Israel Union for Environmental Defense](#) has filed petitions and lawsuits to ensure environmental regulations and standards are imposed. Among [many other victories](#), these have resulted in convictions of negligent regional authorities, have forced public clean-ups, and have compelled a Haifa chemicals factory to end its water pollution. Meanwhile, law and public policy faculties and environmental studies schools in Israel have created [environmental law and policy clinics](#) that provide legal services, advice, and research on environmental issues (e.g. [urbanism in Israel](#)) to citizens, governmental agencies, and Knesset members.<sup>3</sup>

### Nurturing environmental leadership

The environmental movement has nurtured agents of change, including general directors in ministries, Knesset members, and city council members. Green Course's [Environmental Leadership Training Program](#) and the Heschel Sustainability Center's [Environmental Fellows Program](#) provide participants with the tools and experience to induce environmental change as activists or in their respective positions within the government. Throughout this Greenbook, you will find examples of such programs tailored to specific stakeholders or areas of expertise.

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2 See for example the Green Now campaign from the 2008 local elections, and the [Green Hive Initiative](#).

3 Other clinics include, among others, the [Social-Environmental clinic](#) and the [clinic for environmental policy and practice](#).

## Environmental education

Environmental education is a central activity for both the government and environmental organizations in Israel. The Ministry of Environmental Protection has a [specialized department](#) in charge of environmental education, which works closely with the Ministry of Education and is engaged in “development of environmental education curriculums, community projects, and special events targeted at all segments of the population.”<sup>4</sup> The ministry also funds [environmental research](#) in Israeli academia as a basis for environmental policymaking. The [Society for the Protection of Nature](#) in Israel has earned recognition for its far-reaching and highly institutionalized [environmental educational efforts](#), which have become a staple in children’s curricular and extra-curricular activities. Another important example is the [Green School Network](#), which for over 15 years has been teaching sustainability to children in the formal and informal education systems, empowering school staff and principals, and generating student leadership. Israeli academia plays a growing role in the environmental arena by opening new schools and institutes within the higher education system dedicated to environmental studies. These include for example the [Porter School for Environmental Studies](#) at Tel Aviv University, the [Advanced School for Environmental Studies](#) at the Hebrew University, and the [School of Sustainability](#) at the IDC Herzliya.

## Public outreach

Public campaigns integrate nearly all of the tools in the environmental movement’s tool box. As such, they represent a lion’s share of the movement’s activities, from protesting the [air pollution in the Haifa Bay](#), to demanding [better public transport in Tel Aviv](#), or protecting the [Timna Valley](#) in the Negev from a looming commercial developments that will irrevocably distress its precious ecosystem. Through intensive field work and media outreach, as well as policy advocacy and legal procedures, environmental organizations have succeeded [in 2014 alone](#) in stopping a dangerous fracking experiment in the [Elah Valley](#), in preventing suburban expansion through changes to the national planning code, and in ensuring that the newly found natural gas field off Israel’s coast serves all citizens in the years to come. Examples of other famous field campaigns (which will be elaborated upon in following chapters) include the campaign to [save the coral reef in Eilat](#), the campaign to protect Jerusalem and its natural heritage from the [Safdie plan](#), and the campaign against the [number 6 highway](#), which fragmented open spaces in extensive parts of the country and catalysed urban sprawl.

## Changing business practices

Solving environmental problems at the source is often much easier than resolving their harmful consequences. But regulation alone cannot ensure that companies not only avoid polluting, but also actively contribute to creating a more sustainable economy. Parts of the environmental movement also work with the private sector so that it becomes a bigger part of the solution, rather than the problem. Maala, for example, is an organization that promotes corporate social and environmental responsibility (CSR) in Israel and develops [new paradigms](#) for the social-environmental role of companies in Israel and abroad. Since 2003, it has published an annual [Index](#), which ranks publicly traded as well as privately held Israeli companies on the basis of CSR standards.

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4 From Ministry of Environmental Protection in Israel: [http://www.sviva.gov.il/English/env\\_topics/EnvironmentalEducation/Pages/default.aspx](http://www.sviva.gov.il/English/env_topics/EnvironmentalEducation/Pages/default.aspx)



While aiming to increase the private sector's accountability, these types of initiatives are also highly complex when it comes to interacting with polluters. They must maintain an open deliberation with companies, while insisting on high environmental standards and refraining from "greenwashing."<sup>5</sup>

## Solution oriented initiatives

At times, organizations and activists simply create the change they wish to inspire, whether it be establishing an [urban farm](#), [cutting down illegal fences](#), or creating a pilot project for [new environmental technologies and practices](#). Often the best way to prove a project's viability is by making it happen, thus demonstrating to the government and the public at large its applicability in other places or on larger scales.

## CHALLENGES IN ENVIRONMENTAL FUNDING IN ISRAEL

In Israel and globally, environmental practitioners are facing multiple challenges, from bridging knowledge gaps to appealing to the public in meaningful ways which can translate to behavioral change and endorsement of environmental causes. Clarifying the interlinkages between environmental challenges, the necessary actions, and the interests underlying these issues is key to addressing an ever more complex arena.

- 1) Measuring success** - Funding environmental interventions often requires new ways for defining and measuring effectiveness. First, these interventions at times address the needs of future generations, trying to prevent future harm and occurrences. Although climate change, for example, will most severely affect those born in fifty years, we must act to mitigate its effects today. Second, its beneficiaries may lie outside the intervention's national boundaries (as with cross-border pollution or marine debris).
- 2) Setting the agenda** - Environmental organizations in Israel spend much of their resources reacting to environmental threats posed by developers, polluters and even parts of the government who have an advantage in terms of time and money. Furthermore, much of the environmental funding is earmarked for specific initiatives and the stream of support from traditional funders is dwindling. This leaves organizations with little space for any activity outside the bare necessity of preventing immediate environmental harm. These factors make it much more difficult for organizations to put the necessary resources into proactively setting a broad and long-term national environmental agenda.
- 3) Limited local philanthropy towards environmental goals** - Environmental organizations in Israel receive scant support from local funders. Those who may be considered potential funders in Israel often have a vested conflict of interests with the environmental movement, as they are themselves the target of environmental protest and intervention. Israel's small population results in a limited capacity for community funding, further deepening environmental organizations' dependency on philanthropic money from abroad. This creates an imbalance between local and external funding,

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<sup>5</sup> Another model for private sector involvement in solving environmental problems is through new models for cooperation, such as the [Green Building Council](#), which promotes sustainable practices and standards in planning and construction by bringing all related stakeholders from the industry, government, academy and environmental organizations to one table.

which is hard to overcome. It also increases the risk that organizations refrain from trying out new strategies that may lie outside the scope of their funders' inherently more limited goals, as is apparent in other situations with high dependency on a limited pool of funders. Finally, unlike in the U.S., boards of organizations in Israel are mainly composed of professional environmental experts, activists, and public figures who may not have the skills or networks to extend the organization's funding pool.

**4) Bridging across culture and geography** - Some cultural challenges that funders in the environmental field should to keep in mind:

- ▶ Although most activists are professionals in environmental matters and have a good grasp of policy, they are not as well-versed in fundraising. Some funders suggested that there is a need to enhance their expertise in proposal writing, risk management, and budgetary planning.
- ▶ In order to understand the scale of activity and the proportion of funding relative to an organization's activities, it may be necessary for funders abroad to have a representative acting on their behalf in Israel. <sup>6</sup>

**5) Longer time-frames** - Achieving a lasting and systemic change in environmental regulation or paradigms requires a great deal of patience. Funders should recognize that many environmental goals, in Israel and elsewhere, require changing public opinion, engaging with public officials in different places and levels, waiting for the appropriate political opportunity and creating the conditions to seize it, and ensuring proper implementation.

**6) Ensuring enforcement** - **Proper enforcement** must be maintained in order to ensure that environmental legislation translates to an improvement in people's quality of life and to enhanced environmental protection. The rapid adoption of many new pieces of legislation requires additional resources and new frameworks for successful enforcement.

## WHAT FUNDERS CAN DO

- 1) Help environmental organizations grow and prosper** - The current need for funding diversification requires environmental organizations to develop new skills and strategies. While some organizations in Israel offer development services for NGOs, the environmental organizations can benefit from tailored projects that recognize their unique properties, help them find new sources of funding, improve their fund raising and planning skills, and facilitate cooperation between them.
- 2) Direct resources toward movement building** - The Green Environment Fund led multiple efforts to establish the environmental movement as a coherent force that is more than the sum of its parts. Yet today, organizations' ability to act in synergy has somewhat eroded. The specialization and resources each organization has garnered do not necessarily pool together to increase political clout. Funders can help facilitate strategic processes to define where the movement is going, how it sees itself in the medium and long term, and how it can build on the experience and resources it accumulated throughout the years to realize a shared vision for the future. They can also condition funding on cooperation between different organizations working on similar issues.

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<sup>6</sup> Tips for funding in Israel can be found in the Appendix

**3) Strengthen the environment-society nexus** - The social protests of 2011 gave rise to new awareness and support in the Israeli public for causes that have much in common with the environmental movement's values and goals. Reforming the housing and the planning system in Israel, for instance, carries clear social-environmental implications. Ensuring access to clean water and public transportation is at the heart of both the social and environmental agendas. Making that connection explicit, offering alternative analyses for economic issues, and binding organizations representing different interests and groups in society are essential.

Funders can strengthen the social-environmental nexus by supporting organizations and coalitions that integrate the two perspectives both in their analysis and goals, and in their mode of operation and willingness to cooperate with untraditional allies from outside the environmental movement. They can also help environmental organizations acquire new skills and expertise in economic analysis and risk assessment.

**4) Support new fields of environmental action** - In addition to traditional environmentalist causes such as open space and ecosystem conservation, biodiversity and pollution prevention, the environmental movement in Israel today is offering solutions in arenas that are at the heart of sustainable development, including: urban planning, public transport, and public health. These are some of the central issues raised in the next chapter on sustainable cities.

*Additional information and general advice on funding in Israel can be found in the Appendix.*

## QUESTIONS TO CONSIDER

1. How can funders help environmental organizations in Israel integrate their efforts, resources, and expertise?
2. How can the environmental movement translate the principles and values of "third wave environmentalism" to a clear and actionable agenda?
3. How should funders adjust their expectations and operations to the particular conditions of the local funding arena in Israel? How can they help environmental organizations develop a greater degree of independence and diversification in their financial income?

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# 2 Creating Flourishing Cities

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*This chapter:*

- Examines the meaning of sustainability in urban environments, where most Israelis live.
- Presents the leading challenges and strategies in making cities more sustainable.
- Links local solutions to national and global environmental problems such as climate change.

*The examples in this chapter are for demonstration purposes only. For further information on this topic please consult with JFN.*

## BACKGROUND

Because 92 percent of Israel's population lives in urban settings, the most direct way to enhance citizens' environments is by improving their cities.<sup>7</sup> Israel's geography—with its relatively small distances between the four major metropolitan areas of Jerusalem, Tel Aviv, Haifa, and Be'er Sheva—seems to be ideally suited for urban sustainability. Yet two factors have hindered urban development in Israel: an expansionist ethos and a tradition of suburban building, which is markedly different from American low-rise neighborhoods but falls short of providing a vibrant city environment.

In its early days, the Israeli government encouraged immigrants to settle the far corners of the state—both to secure the country's borders and to cultivate and “reclaim” the land. While security and economic needs have since changed, the ethos has persisted. Thus, instead of following a global trend of convergence into large urban centers where most economic activity naturally takes place, the government persists in an outdated policy of building new towns that draw citizens away from those centers. Even within metropolitan areas, the predominant planning paradigm maintains commuters' dependence on cars, and separates residential areas from commercial, educational, and leisure areas as well as proximity to open spaces.

Sustainable cities aim to provide affordable and accessible housing in close proximity to where residents work and socialize. They offer an opportunity to confront global and regional environmental problems in local settings. Their density allows leveraging economies of scale, and maximizing the value of social services and infrastructure. For example, a well-developed public transportation system can help mitigate climate change. But this requires people to live in proximity to central lines and stations. Achieving greater levels of energy efficiency in buildings is much more feasible in shared residences than in single-family houses that take up far more space and resources. Additionally, cities are hubs of human interaction and innovation, where diverse individuals join together in pursuit of economic, social, and environmental goals.

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<sup>7</sup> For a presentation on the key issues on sustainability and cities and the movement for Israeli urbanism, see [here](#); more information on pathways to sustainability in cities can be found [here](#).

## DESCRIPTION OF INITIATIVES

Organizations in Israel have adopted the urban sustainability agenda as a meaningful arena for achieving long-term improvements in quality of life, protecting ecosystems, and mitigating greenhouse gas emissions.

### Planning and building sustainable cities

Urban planning has lately taken center stage in Israel's social-environmental agenda, bringing together a wide range of groups, from social activists and neighborhood representatives to mayors and members of Knesset. To create more equitable cities, these activists aim to build sustainability into the very fabric of urban communities.

- 1) **Supporting urban renewal and responsible planning** – To answer the country's dire need for new housing, Israeli officials have over the past several years sought to build outside cities rather than strengthen them. But they have also sought to limit environmentalists' ability to oppose controversial planning decisions. In response, environmental organizations, alongside social groups and others, have:
  - ▶ **Fought to maintain** planners' public accountability.
  - ▶ **Suggested alternative solutions** to the problems that face the Israeli planning system.
  - ▶ Joined forces with municipalities in the Negev **to oppose the decision** to establish new towns in the south instead of expanding existing cities in the area. (When the government encourages residents to spread outside city centers, it undermines cities' efforts to become denser and offer better public services.)
  - ▶ Collaborated with environmentally-minded ministries to **block** plans to allocate rare open spaces outside cities for building new units, instead of building within city limits.
- 2) **Offering alternative visions** – Rather than spreading out over a large area as in the suburbs, city dwellers live in compact, mixed-use neighborhoods, where more sustainable means of transport prevail. Environmental groups in Israel have translated these principles into detailed visions, strategies, and policies, including: [Israel Urban 2050](#), the [Sustainable Urbanism Project](#), and the [Guide for a Sustainable Municipality](#).
- 3) **Preventing building in sensitive areas** – In 2004, the so-called [Safdie plan](#) proposed building 20,000 housing units, commercial and industrial spaces in the Judean Hills, west of Jerusalem. The plan threatened to eliminate an important refuge of urban nature for residents and visitors to the city, as well as a [unique habitat for a deer population](#) and over 500 plant species. After a coalition of residents, social and environmental activists, planners, and architects fought a fierce public and legal battle against the plan, in 2007 the National Board for Planning and Construction [rejected the plan](#). Today, this plan is being considered yet again, demonstrating the need for constant vigilance.

**4) Creating opportunities for joint action and learning** – By sharing knowledge and committing to common objectives, cities can adopt and implement both specific policy measures and broad long-term visions. For example, Israel's fifteen largest cities [signed a treaty](#) to reduce air pollution and greenhouse gas emissions, and were given tools for creating city-wide emission reduction plans. Other cities have joined the [Healthy Cities Network](#), which promotes a global agenda of urban sustainability ([Agenda 21](#)), with a focus on residents' personal health. Some networks are based on environmental organizations such as the [Green Building Council](#), which brings together the private sector, the academia, and other organizations in the environmental movement.

**5) Training local officials for sustainable planning** – Local officials and municipalities can enroll in environmental learning and leadership programs, including:

- ▶ The [Center for Local Sustainability](#), which aims to build capacity for sustainable management in local governments in Israel. It recruits, trains, and networks advocates, municipal professionals, and mayors through courses, workshops, and conferences. It also develops tools for local sustainability in municipal planning, management, and legislation, and connects Israeli initiatives to their counterparts abroad.
- ▶ The [Israeli Mayors' Institute on City Renewal](#), which aims to raise mayors' awareness of sustainable urban planning. It offers three-day workshops that expose participants to best practices from around the world, and offers brainstorming sessions on common problems.
- ▶ Israel's annual [public transportation conference](#), organized by [Transport Today and Tomorrow](#), draws together officials from the highest echelons of the Ministry of Transportation, members of Knesset, bus operators, mayors, and activists.<sup>8</sup> This kind of interaction is not limited to a single event; in fact, the organization coordinates [workshops, courses, and conferences](#) year round.<sup>9</sup>

**6) Utilizing unused public property to create new public spaces** – An abandoned school in the center of Tel Aviv, [Beit Tzeirot Mizrachi](#), became one of the symbols of the 2011 social protest movement. The former school belongs to the Tel Aviv municipality, which had sealed it indefinitely in 1999. During the protest, activists who squatted in it demanded that the municipality emancipate the building, and countless others like it, for communal purposes. Though they were evacuated, activists continued their protest. Meanwhile, residents organized a host of activities next to the building, breathing new life into the site, and creating a sense of communal stewardship that the municipality could not ignore. Finally, [in 2013 the municipality agreed](#) to renovate the building, to consult the public on its future use, and open a community center there.

Another case of community activism concerns the 15-year effort to transform one of the last pieces of open land in south-central Tel Aviv into the [Kiryat Sefer park](#) rather than an office building. Activists held weekly picnics, activities for children, and barter markets. At the same time, they took legal

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8 The conference affords an opportunity to consider new alternatives for promoting public transportation, and to raise problems in policy formulation and implementation that may contradict the transport community's vision of better services

9 One course, for example, teaches local council members and planners the benefits of sustainable transportation, and how they can promote it. Another conference, which focuses on the technical aspects of sustainable transportation, targets municipal engineers.

measures against the municipality, and in 2011 the district court ruled in their favor, setting the grounds for establishing the new park.

In other places, activists were able to pressure the municipality to set in motion a [comprehensive planning process](#) to identify and develop new public spaces in neighborhoods that have seen a change in primary usage and an increase in number of residents.

## Giving priority to public transportation

Urban public transportation, one of the pillars of urban sustainability, advances social equality, economic growth, and environmental health. By providing an accessible alternative to car use, it increases urban density and saves scarce land. By reducing the number of roads required in and around a city, it limits water pollution from road residue and safeguards ecosystems from unnecessary fragmentation. As a multifaceted issue it presents a unique opportunity to save open spaces, protect biodiversity, and promote social justice and equality.

Over the past decade, the Israeli train system has expanded its reach, increased its speed, and installed new cars that offer an improved riding experience. Some capacity problems persist, particularly early and late in the week when the train system transports hundreds of thousands of soldiers to their pick up points. [Ridership is breaking records](#), with 2013 showing a 12 percent increase in the number of users over the previous year. Still, despite the marked improvement in inter-city public transport, many drivers are deterred by having to use the public transport system once they enter the city.<sup>10</sup>

**1) Public campaigns** – In 2009, a local coalition of social and environmental groups in Tel Aviv [launched a campaign](#) calling for a bus rapid transit (BRT) system in the city. Similar systems have either been installed or planned in [other cities in Israel](#). Despite their relatively low price per kilometer, they can significantly improve travel times and incentivize the use of buses. The Metro 4 All coalition (“[Mahir Bair](#)”, or “Metro for All”) canvassed local residents, organized media events, and offered public officials a detailed outline for planning and implementation.

The Ministry of Transportation and the Ministry of Finance endorsed the plan, and were willing to allocate the funds necessary for its implementation. But the then-mayor of Tel Aviv (and its current mayor), Ron Huldai, opposed it, fearing it would undermine a plan to develop an underground/light rail metro system (a plan that has been in the pipeline since the 1970’s, to no avail). The campaign gave the Ministry of Transportation the public backing needed to start experimenting with BRT in Tel Aviv and other cities in the metropolitan area. Tel Aviv’s first BRT line was [launched](#) in 2014.

**2) Empowering consumers** – Five years ago, a group of Jerusalem residents campaigned to improve public transportation in the city, with the goal that it would take no more than 15 minutes to reach the city center by bus. They organized forums to discuss and motivate change in the bus system and conveyed their feedback to the Ministry of Transportation. The spread of this [model](#) to other

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<sup>10</sup> Urban bus networks often lack the ingredients necessary to ensure that service is fast, convenient, and consistent. Furthermore, investment in public transportation still lags far behind investment in automotive projects and services. To counter such shortcomings, environmental organizations and their allies in the public and private sector seek to tip the scales on national and local levels alike.

municipalities highlighted an important but underappreciated actor in the policy network: the consumer. Unlike national policy discussions, [consumer-side action focuses](#) on specific bus lines and grievances. Commuters demand a new line, or a change in an existing route. They monitor bus frequencies and point out where reinforcement is needed at particular times of the day.

## Promoting alternatives to cars

Cities in Israel allocate much road space to cars, literally and metaphorically pushing pedestrians and cyclists to the margins. Each additional pedestrian and cyclist who gives up car use reduces air pollution, lowers greenhouse gas emissions, and lowers the chances of fatal accidents. Environmental groups and a growing number of community organizations have promoted more people-centered cities in the following ways:

- 1) Promoting bicycle infrastructure and incentives** – To ensure that cyclists are out of harm's way and feel sufficiently safe to commute by bike requires separate and continuous bike lanes. The [Israel Bicycle Association and its local chapters](#) have urged municipalities to develop plans for bike lane networks, and to implement them in such a way that would assure that cars don't get in their way. On a more systemic level, the Knesset's social-environmental caucus has been [promoting a bill](#) to ensure that commuters have the necessary facilities to use bicycles as their primary means of daily travel, such as bicycle parking facilities and showers for cyclist commuters in large office buildings. It also provides financial incentives to encourage commuters to cycle to work and municipalities to build new bicycle lanes. Sustainable transport organizations in Israel have meanwhile issued [a manual for employers](#) who wish to promote non-motorized commuting among their employees. One of the organizations' most celebrated successes was the establishment of a [bike-share program](#) in Tel Aviv, which for a modest annual subscription fee allows users to pick up city owned bikes throughout the city, and leave them close to their destination.
- 2) Limiting car use** – Many municipalities in Israel are building additional parking space and allow cars to park on sidewalks. Instead of building streets that fit pedestrian scales and needs, they design roads that are optimal for cars and drivers. Thus, pedestrians often lack sufficient space to walk safely and comfortably in the city. In response, environmental groups have been attempting to [reform the parking code](#) so that it limits rather than encourages additional parking spaces. They have also opposed a municipal initiative to build new parking lots and increase on-street parking.

## Turning waste into a resource

Since 2007, municipalities in Israel have been required to pay a fee for each ton of waste they send to landfills. These fees, which have gone up over the years, fund national investment in recycling infrastructure and education, reaching even greater financial savings to cities and residents. Municipalities must also supply recycling bins, and have financial incentives to decrease the amount of waste residents generate. Yet 80 percent of the country's waste goes to landfills. Environmental groups have successfully lobbied the national government to expand its recycling legislation, including laws to mandate [electronic waste recycling](#), [packages recycling](#), as well as bottles and tires. At the local level, activists have [applied](#)

pressure directly on mayors to make recycling easy and accessible for all residents. Some municipalities, like Kfar Saba, took on recycling as a primary agenda and developed pilot projects to make recycling easier and more accessible.

## Reclaiming community-spaces and protecting urban nature

Real estate interests in Israel often trump the need for functional open spaces that serve residents and maintain the city's biological diversity. However, local environmental organizations and initiatives have been successful in making a claim for urban nature in local agenda and priorities in the following ways:

- 1) **Safeguarding trees** – Trees afford enormous environmental benefits in urban areas: They improve air quality, limit emissions of greenhouse gases, reduce flooding and water pollution, calm traffic, lower incidences of asthma, offer shade (especially important in the Israeli climate), and contribute to a street's appeal and property value. Though Israeli cities are relatively young, their residents have developed a sense of stewardship for street trees, and with the help of forestry officials have fought and won municipal plans to uproot or relocate them.
- 2) **Helping integrate nature into urban planning** – In 2010, the Open Landscape Institute published a manual that articulated the benefits of conserving and rehabilitating nature within urban environments and suggested ways open spaces might be integrated into urban planning. The manual, developed in cooperation with the Ministry of Environmental Protection, demonstrated how civil society can work with governmental bodies to strengthen environmental policy.<sup>11</sup>
- 3) **Establishing community gardens** – Community gardens provide city residents the opportunity to enjoy urban nature on smaller scales, and build a sense of community ownership over their neighborhood through local environmental stewardship. They also allow residents to dispose of their organic waste in compost bins that create compost for use on site.<sup>12</sup>

## Reducing urban air pollution

According to the OECD, in 2010 more than 2,500 people died in Israel from air pollution. A 2014 report by the World Health Organization ranked Israeli cities as the twenty-second worst in the world (tied with Sri Lanka and Chile). A later chapter on environmental health deals with air pollution on a broader scale, but here we can note that this environmental health problem (primarily caused by emissions from vehicles, factories, and power plants) disproportionately affects residents of cities. For more than two decades, environmental organizations have led several charges:

- ▶ To increase accountability in industrial areas, such as the Haifa Bay.
- ▶ To demand answers from public officials on government permits for using highly polluting fuels in urban areas, and bring to light new information on the severity of the problem and ways to mitigate pollution.

<sup>11</sup> One tangible example of the integration of nature protection in the policy process is the Jerusalem Municipality's development of a comprehensive management plan for urban nature sites.

<sup>12</sup> Community gardens may also raise residents' environmental awareness and even spur new campaigns to preserve urban nature and allocate land for public use on account of parking lots for example. Additional information on urban farming and gardening can be found in Chapter 3 – Celebrating Israel's Natural Heritage, and Chapter 6 – New Frontiers in Environmental Innovation.

- ▶ To [change the fuel mix at the Reading Tel Aviv power station](#).
- ▶ To prevent the construction of a [new coal power plant in Ashkelon](#), even after the government had already passed a resolution in favor of its construction.
- ▶ To pass the Clean Air Bill, which creates [specific provisions](#) to ensure that cities have the tools to diminish urban air pollution in areas under their jurisdiction. In this case, environmental organizations worked closely with the Knesset's Social-Environmental Caucus.

## Changing Israel's energy mix

While Israel has abundant sun and a [flourishing cleantech industry](#), the country still predominantly relies on fossil fuels for its electricity production. Organizations such as [The Israel Energy Forum](#) have been working to push the government toward wider adoption of sustainable energy and energy conservation policies, as part of a wider understanding of the country's obligation to mitigate climate change.

## CHALLENGES FOR FUNDERS

- 1) Accommodate a shift in focus** - Funders are often drawn to causes in Israel's geographical periphery. Some problems in urban sustainability, however, require that funders focus on Israel's large metropolitan areas. For example, while providing recycling schemes and building bicycle lanes are important in towns and cities everywhere, creating a bus rapid transit system is necessary first and foremost in the Dan metropolitan area, where a large portion of commuters travel every day to work. Furthermore, changing planning paradigms—which tend to be diffused over several levels of government—may be even more challenging than reforming national legislation, as they occur in local government and national government, in planning committees and in fragmented Ministries' decisions all of which require continuous advocacy and monitoring. Finally, there is the question of the target audience. Underprivileged populations stand to gain the most from a more a sustainable city. But interventions often try to impact the behavior of car owners and those with means, who are responsible for a larger share of environmental degradation and exert a greater influence on urban life.
- 2) Local action, national authority** - Due to Israel's small size and centralized government, most initiatives on a local level require some sort of national intervention. Those officials with the authority to bring about change are not necessarily those who have the responsibility or interest to carry it through. For example, changes in local public transportation depend on the approval of the Ministry of Transportation. Changes in local zoning may require authorization by the Ministry of Interior. Financing for infrastructure projects may require approval and allocation by the Ministry of Finance. On the other hand, government ministries may encounter local opposition when trying to promote sustainable policies as well. Thus, enacting change in cities may require action in the local arena and the national arena simultaneously.
- 3) Enact effective yet feasible change** - Effecting lasting sustainable impact on a city can be measured by different scales. Some programs focus on single plots or neighborhoods, while others aim at

a citywide scale. Funders should clearly define both the rationale and the desired effects of their initiatives. The most ambitious proposals are not necessarily the best. For example, in order to make public transportation more appealing, cities can dedicate bus lanes to shorten trips, rather than wait for government funding for a light-rail project. Building a relatively small park in a central location in the city, using available land or existing structures, could enhance its liveability more quickly and effectively than transforming huge swaths of land in the city outskirts (though both may be critical for urban sustainability and should not cancel each other out).

- 4) Ensure rights** - Urban renewal has the potential to create vibrant city centers, with all the ensuing environmental benefits. But if renewal is not complemented by additional steps to ensure social housing services and rights, it may cause an increase in housing prices that pushes poorer populations out of the neighborhood or even the city ([as we are now witnessing in Tel Aviv](#)). Furthermore, some initiatives seek to impose change from the outside, rather than answer the needs and capabilities of existing residents.

## WHAT FUNDERS CAN DO

- 1) Support local groups** - Many urban initiatives and campaigns start with a group of dedicated residents and stakeholders pushing their agenda forward (as in the [Kiryat Sefer park](#)). These groups, though often lacking in resources, may achieve a sizeable impact with relatively little financial assistance. A successful small-scale initiative may inspire similar initiatives elsewhere in the city and other cities as well.
- 2) Support national groups** - In Israel, national and local causes are often indistinguishable. National groups shine a spotlight on local problems, and local issues require national solutions in legislation, governmental initiatives, or funding. This is especially true in cities, where for better or worse the national government heavily influences the municipal agenda.
- 3) Foster networks** - Cities can learn from one another, and support one another in planning and implementation. Municipal networks are a political force in their own right, and environmental organizations can multiply their effectiveness when they cooperate with and harness such networks.
- 4) Import experience** - Israeli cities lag behind on the benchmarks of sustainability, from green infrastructure to cycling rates. Reasons for this include inadequate funding and logistical obstacles. But the gap could also stem from Israel's geographic isolation, which reduces its interaction with other cities in the region. Funders could help environmental organizations connect with global leaders in urban sustainability, thereby spurring urban innovation.
- 5) Support academic research** - Scholars who study urban planning in Israel argue that even world-renowned researchers in the field here rely heavily on scarce government funding. Furthermore, policymakers can better understand urban planning as a scientific discipline, a field which relies on observation and experimentation to evaluate policy prescriptions. Lastly, there is a clear need to facilitate [new training opportunities](#) and requirements for architects and planners who have been active for years, as is the case in the U.S.



## 6) Encourage planning for long-term sustainability

Although Israel's large cities are constantly engaged in strategic planning, they have yet to define in any concerted way the sustainability challenges each faces, or to plan effective responses, set clear goals, allocate the necessary funds, or regularly monitor progress toward planning goals.

### QUESTIONS TO CONSIDER

#### 1. Who benefits from my initiatives, and who is left out?

Urban renewal projects carry indirect or unintended consequences. For example, projects that aim to build new dense neighborhoods could trample on the rights of existing residents (as in the [Givat Amal](#) and [Kfar Shalem](#) projects in Tel Aviv). Increasing prices in redeveloped neighborhoods could drive out residents who can no longer afford the rent, exacerbating the cycle of gentrification. Frequently, improvements in the wealthier parts of a city neglect its poorer areas, especially when doing so serves the mayor's electoral needs.

#### 2. How can I empower local communities?

Residents and local movements are best equipped to identify obstacles to sustainability in their immediate surroundings, as well as ways to overcome them. However, they often lack the means to scale up their campaigns and initiatives, or to make use of professional resources required to bring their causes to fruition.

#### 3. Where might I most effectively induce the change I am hoping for?

Once funders identify the urban issue they intend to address, it is crucial to define where the proposed initiative will have the largest impact. If, for example, we aim to reduce air pollution by diverting commuters from cars to public transport, cycling or walking, we should look for projects that target areas with the most severe cases of air pollution.

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# 3 Celebrating Israel's Natural Heritage

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*This chapter:*

- Focuses on the natural systems which are at the heart of nature protection in Israel.
- Examines the multifunctional role of Israel's natural heritage, including its open spaces, animals, plants, and ecosystems as a whole and the crucial services they provide for agriculture, tourism, leisure, and education.
- Outlines how preserving Israel's natural heritage can contribute to the resilience and prosperity of the economy as a whole.
- Explores initiatives that protect Israel's natural heritage, close the data gap on the state of nature in the country, and assure long-term sustainability through informed planning.
- Describes alternative approaches to planning, tourism, and agricultural practices that accommodate development needs while at the same time preserving Israel's natural heritage.

*The examples in this chapter are for demonstration purposes only. For further information on this topic please consult with JFN.*

## BACKGROUND

Israel is blessed with breathtaking natural landscapes and an astonishing diversity of flora and fauna. Various initiatives celebrate and protect the country's precious natural heritage, aiming to preserve its open spaces, species, and habitats, to encourage tourists and Israelis to [experience firsthand](#) its natural capital, and to help policymakers understand our dependence on healthy ecosystems. Science is playing a growing role in monitoring and explaining natural systems' contribution to our well-being: the material products and services they provide, such as clean water and flood prevention, as well as the economic opportunities and cultural activities they offer.

However, Israel's growing population and needs are exerting enormous pressure on the country's dwindling open spaces. By the year 2020, Israel is expected to be the most [densely developed country](#) in the Organisation for Economic Co-operation and Development (OECD). Thus, the government faces intense pressure to utilize its land reserves to provide adequate housing solutions, industrial expansion, agriculture, and even defense. If carried out imprudently, this could lead to over-exploitation and even [the disappearance of open spaces](#) essential for maintaining biodiversity, ecological services, sustaining high quality and quantity of water sources, and safeguarding public health.

## DESCRIPTION OF INITIATIVES

### Promoting nature conservation

Israel's land scarcity often makes development and conservation decisions the source of bitter contention. Private and public interests diverge, of course, but disagreements regarding land use may arise even within the environmental movement. As 93 percent of Israel's land belongs to the state, decisions taken by national and local planning committees may be irreparable and of great magnitude in terms of their environmental and social effects. Influencing the planning system is therefore a critical part of addressing environmental concerns (more on this in [Chapter 2 - Creating Flourishing Cities](#)).

**1) Helping planners take open spaces into consideration** - Various [initiatives](#) promote plans to strengthen the four population centers in Israel as an alternative to establishing new cities. Focusing on urban renewal and creating flourishing cities reduces the development pressures on additional public open spaces. To accomplish this, the environmental movement:

- ▶ Informs policymakers and planners on how to safeguard open spaces and promote [urban renewal](#).
- ▶ Articulates clear policy principles and priorities.
- ▶ Collects, analyzes, and presents data about open spaces and their value.
- ▶ Raises awareness among decision makers, planners and other professionals on the importance of open landscapes and on the ways they may be protected.

**2) Participating in national planning** - Some environmental organizations [participate](#) as full voting members in national planning institutions and committees, such as Israel's National Planning Committee (the National Planning and Building Council), the Israel Land Council, and district planning committees. Representatives of those organizations regularly [report](#) back to the movement and the public, increasing transparency and helping the movement prepare for possible conflicts that may arise. [Safeguarding](#) the right to representation and participation in the planning process, a right unique to the environmental movement, ensures that environmental considerations are clearly represented in government deliberations. That this right cannot be taken lightly is demonstrated by a [recent government reform](#) that attempted to exclude public participation at the key planning committee and later in the entire planning process.

**3) Evaluating alternatives to large-scale development** - The plan to build a [railway to Eilat](#) may sound like an economically beneficial initiative. It would allow cargo to move more swiftly between the Red Sea and Mediterranean ports. But many experts, both within and outside the government, argue that the plan is far from cost effective.<sup>13</sup> [An independent report](#) by the Society for the Protection of Nature in Israel (SPNI) estimated that it would require over 40 years and 2 million passengers annually for the government to recoup its investment.

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<sup>13</sup> Arguments against the proposal include:

- The project's NIS 40 billion price-tag could be used instead to revolutionize Israel's public transport system in cities where it has the potential to serve the most people and create the greatest social-environmental benefits.
- The rail proposal [threatens to disrupt](#) one of Israel's most significant natural areas and its ecosystems.
- It would also require an expansion of the Eilat port, endangering the already ailing coral reef, one of the city's main tourist attractions and a precious marine ecosystem.

**4) Working with stakeholders to promote conservation** - One interesting example for cooperation is the work with the military. The [Israel Defense Forces](#) controls most of the land area in the Arava desert, where it trains hundreds of thousands of troops stationed in isolated bases. Thus, it is well [positioned to impact its surrounding ecosystems](#), for better or worse. It also has clear non-environmental interests.<sup>14</sup>

[Cooperation with businesses](#) has also promoted conservation projects. For example, in the [wineries project](#), protection of biodiversity is promoted through a partnership between an environmental NGO and a winery through the implementation of environmental practices such as the reduced use of pesticides.<sup>15</sup>

## Enabling science-based decision-making

- 1) Long-term monitoring and research** - This is essential for understanding dynamic processes within an ecosystem, assessing their significance, and supporting conservation. [Israel's National Ecosystem Assessment Program](#) runs a multi-stakeholder platform that manages long-term monitoring on land and in [the Mediterranean Sea](#).<sup>16</sup>
- 2) Taking stock of ecosystem services** - The global effort to define and evaluate ecosystem services builds on local knowledge of specific ecosystems. One initiative has launched a multi-partner effort to [assess Israel's ecosystem services](#), so that policymakers can clearly understand their utility (including economic value). The initiative strives to increase awareness of the multifaceted dependence on functioning ecosystems, and to assist policymakers in incorporating that awareness into planning policy and land management.
- 3) Closing the data gap** - A think-tank affiliated with the SPNI conducts an [initiative](#) to survey, evaluate, and classify Israel's open spaces and their natural and cultural resources. Survey data, together with the resulting recommendations, are [digitally mapped](#) and summarized. The data is then distributed to planners, environmental groups, and development authorities so that it can provide background material for sustainable land-use planning and development. Surveys of large parts of Israel have been completed, but the map requires constant updating in light of heavy development.
- 4) Training the next generation** - The environmental movement's efforts to maintain Israel's ecosystems relies first and foremost on experts able to continually monitor and warn of dangers to the delicate balance between human needs and our environment. Even in [schools for environmental studies](#) that offer inter-disciplinary training to aspiring environmentalists, there is a lack of more specific training

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14 For example, the Israeli Air Force (IAF) has lost 11 aircraft and 3 pilots to bird strikes, which contributed to 75 other collisions. Environmentalists have helped the IAF use its technology and equipment to reduce collisions between birds and aircraft by 76percent over the past three decades, saving an estimated \$1 billion. This has become an [exemplary model](#) for air forces around the world. Another initiative transformed 22 deserted bunkers along the Jordanian border into roosts for endangered insect-eating bats.

15 A video in Hebrew on the eco wine project can be found [here](#).

16 One striking example of the importance of such long-term research is an Israeli law enacted in 1950 that aimed to protect the natural regeneration of vegetation by limiting the grazing of goats in woodlands and preventing overgrazing. Based on short-term observation and inference, [the law intended to prevent herds of goats from totally wiping out the vegetation](#). But once the law was put into practice, the absence of goats had some unintended consequences. With no goats to thin them, certain dominant plant species completely suppressed other species. The well-intentioned law reduced biodiversity, and increased the fire hazard. As this case shows, [long-term research based can better inform regulatory decisions](#).



on conservation. However, some [programs](#) place students in environmental organizations. [Others focus on professionals](#) or on placing excelling graduates of Master's programs [in the Ministry of Environmental Protection](#).

**5) Establishing biosphere reserves and regional parks** - A [biosphere reserve](#) is a delineated swath of land where nature is protected and limitations are set on construction. Communities and infrastructure may be developed and even expand so long as this activity does not undermine the nature reserve. Such reserves harmonize human habitat with nature conservation. [Mount Carmel](#) was the first area to be [granted a biosphere reserve status](#) in Israel. In 2011, the United Nations Educational, Scientific, and Cultural Organization ([UNESCO](#)), announced a new biosphere reserve in [Ramot Menashe](#) in the north, which "functions as a pilot site for sustainable development practices which could be adopted by other dryland biosphere reserves."<sup>17</sup> The reserve engages a wide range of communities, the Druze minority among them, and features a combination of natural wild growth, agricultural activity, and forests planted by humans. Only 10 percent of the area is developed for housing and infrastructure.

Efforts are currently underway to promote the idea of [establishing a biosphere reserve in the Dead Sea](#). Regional environmental organizations believe that declaring it a UNESCO site of global significance would provide the necessary protection for this rapidly dwindling body of water, and facilitate the tri-national cooperation needed to reverse decades of degradation. Such an effort may also prove crucial in reconsidering the Red Sea–Dead Sea pipeline ([Red-Dead project](#)) that [experts fear](#) will cause detrimental changes to water appearance and quality.

The Dan metropolitan area has seen another kind of transformation over the past few years. The former Hiriya landfill (450,000 square-meters and 60 meters high) is being turned into a [park](#) that provides a "green lung" filled with fields, streams, and lakes. It is also home to a [recycling and educational center](#) that seeks to inform the national discussion regarding waste and consumption.<sup>18</sup>

## Inviting the public to celebrate Israel's natural heritage

Israel's historical and natural heritage make it a unique international destination: religious sites, birding and diving locations, the Dead Sea, and more are all within easy reach. To preserve these sites, the environmental movement in Israel has promoted innovative ways to ensure that future generations can enjoy the same cultural and natural wealth.

**1) Celebrating Israel's biodiversity** - Israel, located at the junction of three continents, serves as a bottleneck pathway for 500 million birds that migrate along the African-Eurasian flyway twice a year. This makes Israel, itself blessed with 540 different species of birds, a hotspot for research, conservation, and educational activities. The Hula Valley [bird festival](#), for example, attracts hundreds of birdwatchers, photographers, and bird lovers from Israel and abroad. In Jerusalem, the state allocated land for

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<sup>17</sup> From: <http://www.deshe.org.il/?CategoryID=206>

<sup>18</sup> An onsite café is a [social enterprise](#) which hires at-risk youth from the area and models recycling, composting, and the use of reusable or biodegradable cutlery. All its profits are invested in educational activities and scholarships to benefit young people at risk. It also hosts a facility which uses advanced and innovative recycling methods that turn the waste of the Dan metropolitan area into efficient energy, water for irrigation, organic manure, and garden furniture. The park is a result of [joint efforts](#) between a foundation, national and local government, which together have rehabilitated what had been a notorious mountain of waste.

Israel's first urban wildlife site, a unique [bird observatory](#) adjacent to the Knesset.

Marine habitats form another important part of Israel's rich biodiversity. However, recent data suggests that the country's fish population is in danger both in size and in species [resilience](#). While the Ministry of Agriculture is considering a reform of the fisheries bill, recreational fishermen came together to agree on a [sport-fishing code](#). Other initiatives encouraging Israelis and tourists alike to enjoy Israel's biodiversity include the "[Scarlet South Festival](#)" ("Darom Adom"). This festival is produced by the Sedot Shikma Besor Tourism Organization in the flowering fields of the northern Negev in February every year. It includes activities for families and individuals set in the red carpets of anemones (kalaniyot flowers), the natural, historical, and leisure sites of the region.

In addition, one of the environmental movement's most striking successes has been to integrate nature appreciation activities within the formal and informal education system.<sup>19</sup> Furthermore, Israel's national parks and reserves are busy locations for domestic tourism and recreation. The [Israel National Trail](#) (Shvil Israel), a thousand-kilometer path that winds its way from the northern border with Lebanon to the Red Sea in the south, offers a wide diversity of landscapes.

**2) Eco-tourism** - The global tourism industry has become increasingly aware of the need to reduce the burdens tourism may inflict on natural resources and local communities. Hotels and operators strive to save and recycle water, reduce energy consumption, increase recycling rates, use eco-friendly products, and promote sustainable transportation and green building.

In tandem with this global trend, one [initiative](#) has concentrated on leveraging the Israeli tourism industry into natural and cultural resources conservation. It aims to empower local communities and contribute the region's economic and cultural prosperity. The initiative provides environmental guidance and training for local stakeholders in the tourism industry, including local tour operators. Participants take part in lectures, courses, and seminars, receive financial support, and earn certifications that reflect a commitment to sustainability.<sup>20</sup>

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<sup>19</sup> These include:

- Going out to the field: strengthening the connection of Israel's youth to the land by giving children opportunities to explore Israel's wilderness. For example, the [orienteering](#) movement allows children ages 7-18 to meet weekly for outdoor activities in their area and take part in hiking trips around the country. The [sea scouts](#) movement (part of the scouts movement) exposes youth to the sea and holds activities related to conservation and beach cleanups.
- The country's wide [network of field schools](#) provides affordable accommodation and tours, and combines education, conservation and research.
- Active learning by watching and participating, even from a very young age, including:
  - Placing a [bird nest box for kindergartens](#) or [schools](#).
  - A [school anti-littering program in different cities](#), which includes classroom learning, educational field trips, and mapping of the surroundings.
  - The [adoption of a local natural site to be maintained and cultivated by the school](#).
  - [Learning about life in the region in the distant past](#), and teaching skills to thrive in nature without modern technology.
  - Establishing educational centers for Israel's natural history. One initiative is the [Biblical Museum of Natural History](#) in Beit Shemesh, which showcases the mammals, birds, reptiles, amphibians and insects mentioned in Scripture, as well as related zoological topics from the Talmud.
  - Encouraging [citizen science](#). Bird watchers, butterfly buffs, and seafarers, for example, have helped monitor biodiversity. In addition, [fishermen, yachtsmen, and recreational boaters have provided scientists](#) with a growing number of sighting reports on jellyfish movements and marine mammals off Israel's coastlines. The first sightings of a gray whale and a monk seal near Israel's shores were reported to the Israel Marine Mammal Research & Assistance Center by volunteers.

<sup>20</sup> For example, the program provides guidance on how to plan tourism in a protected area and how to create an eco-tourism site. It conducts assessments and determines the Limits of Acceptable Change (LAC) for natural and cultural resources that are subjected to tourist activity.

Another initiative turns a pilgrimage route into a green experience: The city of Jerusalem became a founding member of the [green pilgrimage network](#) in 2011. The interdenominational initiative, backed by the Alliance of Religions and Conservation (ARC) and Local Governments for Sustainability (ICLEI), aims to ensure that pilgrims and eco-friendly tourists leave a “positive footprint.” It also works to promote the local strategy for conserving the city’s unique cultural, religious, and natural heritage, alongside sustainable urban infrastructure and economic growth.

The [Blue Flag initiative](#), spanning 49 countries, promotes voluntary eco-label certification for beaches in Israel. It works towards a more sustainable development of beaches and marinas through strict criteria that define required water quality, environmental education and information, environmental management, safety and services. In 2014, the number of Blue Flag beaches more than doubled. Today, 21 beaches in Israel (including one at the Kineret/Sea of Galilee) are already certified with the eco label.

## Encouraging sustainable agriculture

Besides supplying our food, [agriculture plays an important role](#) in environmental protection, landscape preservation, and rural employment. Farms are increasingly engaging in direct marketing of produce, environmental plant management practices, energy production, and agro-tourism. Multifunctional agriculture is emerging as an instrumental approach in rethinking the future of agriculture and rural living in a highly urban country.

- 1) Agriculture as aesthetics** - In the 1950’s, more than 20 percent of Israel’s population worked in agriculture. Today that figure is around 2 percent.<sup>21</sup> This dramatic shift has brought about a change in the way agriculture and its benefits are perceived. [Tama 35](#), the country’s master plan for construction, development, and preservation over the coming decades, designates areas of agricultural landscapes for conservation.
- 2) Adopting sustainable practices** - Industrial agriculture often requires the use of pesticides, herbicides, and fertilizers that pose risks to human health, as well as to soil and water quality. A number of large chain stores only purchase produce grown with alternatives to chemical use (a practice only in its infant stages in Israel). However there are alternatives to intensive agricultural practices. One such alternative method is using natural predators that can diminish the pest population in the field. Given Israel’s geography, and since this practice is more effective with regional cooperation; Israeli farmers, scientists, and conservationists have over the last decade led a people-to-people initiative with participants from Israel, Jordan, and the Palestinian Authority. Together they established 3,000 nesting boxes in agricultural fields in each of the countries. The boxes attract pairs of barn owls, which feed on 2,000-6,000 rodents a year, creating an efficient replacement for pesticides. This [national project](#) is still expanding.
- 3) Experiencing eco-farming practices** - One [educational eco-farm](#) in the south of Israel offers an example of a growing phenomenon in the country. It brings to life the abstract concepts of

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<sup>21</sup> For more statistical information on agriculture in Israel please consult the 2013 agri-statistical atlas [here](#)

sustainable agriculture and rural lifestyle, up-cycling, and the balance between humans and nature. The eco-farm offers tours and workshops where visitors and volunteers learn about sustainable technological, agricultural, and community practices.<sup>22</sup>

- 4) **Promoting agents of change** - A [fellowship program](#) provides post-doctoral scholars an opportunity to work in a government ministry, in order to promote environmental analysis and science-based policy in different fields, agriculture among them. Another program which was run by the Ministry of Agriculture [provided support](#) for agricultural committees (regional agricultural coordination organizations) and rural municipalities that wished to scale up local solutions that enhance the sustainability of local farming. It supported three projects before it was discontinued. Regional councils have a [green forum](#) focusing on planning in the regional level. It includes different stakeholders from regional councils, governmental organizations, a planning think tank affiliated with SPNI, and a philanthropic fund.
- 5) **Encouraging urban agriculture** - Growing food in cities shortens the distance food has to travel, and allows communities to become more independent and take ownership over food production. Today, urban agriculture is slowly spreading throughout Israel. In the north, it is driven by a loss of connection between consumption and production. In the south, it is driven by the need for direct access to fresh healthy produce. (See [Chapter 6 - New Frontiers for Environmental Innovation](#) for additional examples.)

## Protecting treasures of natural heritage

- 1) **Safeguarding species protection**- Israel is home to a rich diversity of flora and fauna. But as globalization accelerates the pace of travel and trade, invasive species increasingly threaten local ecosystems. In response, several initiatives focus on reintroducing species that became extinct in Israel.<sup>23</sup> One initiative is building an accessible and well-documented home for the five million specimens of the natural history collections of Israel ([including the Zoological Museum, the Biological Anthropology Museum, the National Herbarium, and the public education program](#)).

Research and education also play a vital role in biodiversity conservation. The local [birding community](#) has approached Google, NASA, and the European Space Agency to develop technologies that make tracking bird migration accessible to students and the general public.

- 2) **Saving the coral reef** - During the 1990s and early 2000s, fish farms in the Gulf of Eilat bred approximately 2,500 tons of fish per year in [hundreds of tanks in the sea](#). This practice placed an

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<sup>22</sup> Also in the Negev is a [project in Wadi Attir](#), which couples a sustainable agricultural enterprise with a visitor, education and training center in the Bedouin community. The project is the fruit of a joint effort with the local municipal council. It is designed to leverage Bedouin traditional values and know-how with modern-day science and cutting-edge green technologies. The project offers a model of sustainable development in an arid environment, replicable locally as well as in other arid regions around the world.

<sup>23</sup> The Nature and Parks Authority, for example, launched a [joint project](#) with an NGO and the Electric Company to prevent electrification of vultures on electric cables and to reintroduce locally extinct or nearly extinct vulture species in the future. Other reintroduction efforts have already been implemented. For example, The Jerusalem Biblical Zoo continues its efforts for the [introduction of the Persian fallow-deer](#). The Persian fallow became extinct in Israel in the early 20th century. Six deer have been released back to the wild. Tracking of the deer is conducted by radio-telemetry transmitters, providing the project's team with information about their well-being. Another initiative works to conserve biodiversity in cities: [Common Swifts](#), Peregrine Falcons, Common Kestrels and Lesser Kestrels nest throughout urban environments and can be used to expose communities to these birds and their habitats. [Online cameras](#) have already been installed in swifts' nests in Israel.

**enormous burden** on the delicate and world-famous coral reefs of the Red Sea. Some 70 percent of the coral reef was severely affected by fish excretions by the time the **planning authorities decided** not to include the fish cages in the master plan for the Gulf of Eilat. In 2008, the cabinet voted to have them removed following public pressure and a joint movement campaign, thus ending a 20-year environmental struggle against the fisheries. The magnificent coral reefs **still face pollution problems**, researchers note. Every year sees at least one oil spill that harms water quality and **puts marine animals and swimmers at risk**.

**3) Protecting life in the Mediterranean** - The ecosystems of Israel's Mediterranean beaches are being threatened by encroaching real estate; poisoned by waste and pollution; and potentially disrupted by offshore natural gas drilling. **Marine life is under constant pressure** of overfishing. **One initiative** is currently building a general environmental protection platform for surfers, divers, fishermen, businesses, swimmers, boat owners and others to help protect the sea.<sup>24</sup>

The year 2014 marked advancements on two major environmental fronts. First, to counter pervasive overfishing in the Mediterranean, a joint **campaign** by several environmental and fishing organizations yielded a guarantee from the Israeli Ministry of Agriculture to **impose new restrictions and reduce fishing permits** in the Mediterranean, as well as in the Kineret/Sea of Galilee (in 2015). Second, the struggle against real estate development on beaches received widespread support both in **the Knesset** and **in court**. In 2004, the Knesset passed a bill that forbids building within 100 meters of the shoreline. Plans approved before that date, however, were permitted to be built. Since then, the environmental movement worked to pass a new bill that would apply to all building plans that have not yet come to fruition. The movement has also continued to fight against plans in specific sites, such as the **Palmachim beach**, where building would violate the spirit of the law as well as the precious ecosystem.

**4) Proposing an alternative vision for the Jordan River** - Years of water scarcity and growing water demand, as well as sewage contamination, have turned Israel's rivers into drainage canals, or worse. Since the 1990's, the government and environmental organizations **have been working** to rehabilitate the rivers. This complex effort requires coordination with upstream users, some of whom are outside Israeli territory. One of the landmark projects, the **Jordan River rehabilitation plan**, aims to promote a more sustainable agriculture around the river (in order to prevent chemical and waste spills), to increase water allocation to the river, and to limit intensive development and use in sensitive parts of the river. A **Master Plan** for the Rehabilitation of the Lower Jordan River and its Surroundings was presented at an **international conference** in late 2014. Changes in the river's water regime have already **increased water flow** to the river from the Kineret/Sea of Galilee and improved water quality.

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<sup>24</sup> More about **the network**: "The "Sea Defenders" brings together participants from various audiences: "sea users" (owners of yachts, boats and kayaks, fishermen, divers, swimmers, surfers, Trietlonists etc.) alongside businesses, individuals, communities and local authorities. Jews, Arabs, religious and secular, from the periphery to the center who all share love of the sea and concern for its welfare."

## Cross-border cooperation

Animals and resources know no borders. This creates challenges but also affords opportunities for cooperation. As the [Jordan River rehabilitation project](#) demonstrates, Israel's natural heritage provides the setting for cross-border cooperation. One initiative created migratory bird centers in the Palestinian Authority, Jordan, and Israel. Similarly, the Good Water Neighbors project aims to raise awareness about the water problems shared by Israelis, Palestinians, and Jordanians. The project [utilizes the common water problems as a meeting platform](#) to host interaction between the region's youth.

## CHALLENGES FOR FUNDERS

- 1) **Lack of interconnectedness between players in the field** - In order to assist the scalability of new initiatives, funders can play a vital role in convening and bringing together existing resources (academic, business, other new projects, etc.) under one umbrella helping to prevent financial and programmatic redundancies in the field.
- 2) **Overcoming political obstacles** - The concerns described in this chapter require exceptionally wide cooperation, often across political divides, and agreements reached between groups in various countries, municipalities, and government ministries. However, political agreements may be hard to achieve, especially when environmental problems are entangled with larger political questions such as the Israeli-Palestinian conflict.
- 3) **Making an impact on individual choice and behavior** - While government policies can greatly impact nature conservation, much depends on individual choices and behaviors. Environmental campaigns must frame the debate such that it is as effective as possible in influencing people with different interests in diverse social contexts. The fishing examples brought in this chapter demonstrate innovative ways to expand environmental circles. More in-depth explanations of how to affect behavioral change are provided in [Chapter 6 - New Frontiers in Environmental Innovation](#).
- 4) **Representing the public interest** - Environmental organizations often have to confront commercial interests that threaten some of Israel's most important cultural and natural treasures:
  - ▶ [The Elah Valley](#), where the [battle of David and Goliath](#) took place, was set to become a testing ground for oil production (see [Chapter 4 - Environmental Health](#)). Similar threats are currently progressing to the [Golan Heights](#).
  - ▶ Fishing companies harm marine life in the Mediterranean, [at times beyond repair](#).
  - ▶ Drilling in Israel's newly found natural gas fields could lead to severe environmental accidents if not properly regulated.
  - ▶ Real estate interests are encroaching on open spaces as urban sprawl worsens.

## WHAT FUNDERS CAN DO

- 1) **Expand the circle of engaged stakeholders** - Engaging agents of change is essential for preserving Israel's natural heritage. For example, a joint project with the Israel Defense Forces has already yielded great benefits and served as a transformative educational experience for Israeli soldiers and commanders. Approaching additional stakeholders in industry or in government could strengthen efforts to protect Israel's natural heritage and to make it more accessible to different communities.
- 2) **Expand Israel's national heritage program** - In February 2010, the Israeli government adopted the [National Heritage Sites Project](#), with the goal of strengthening the connection of the Jewish people to the land of Israel through the development of historical and archaeological sites. The inclusion of birding in the national heritage program has already helped to change the mind-set and demonstrate the significance of natural heritage to the national heritage. Working to expand the scope of natural heritage in the program would make an important statement with educational and policy implications.
- 3) **Leverage Israel's natural heritage as an economic and cultural asset** - Israel's transformation into a birding destination has already boosted the tourism industry. Expanding initiatives which provide a similar economic-environmental win-win provides both environmental and economic gains, and enables more people to enjoy Israel's natural heritage in a sustainable way.
- 4) **Support capacity building within the planning community** - Familiarizing planners with new approaches and methodologies—such as ecosystem services analysis and multi-functional agriculture—could solidify support for nature conservation and open new ways to bolster environmental protection throughout the planning process.
- 5) **Support sector-specific initiatives** - Work with stakeholders in the tourism industry, for example, to build expertise and implement global initiatives that set environmental standards, train employees, and monitor industry performance. Support specific eco-based tourism like farm-to-table initiatives that raise consciousness about the multi-dimensional value of environmental stewardship.
- 6) **Turn urban agriculture into a viable alternative to intensive industrial farming, ensuring the following components:**
  - ▶ Space allocated to farming in the city.
  - ▶ Municipalities acquiring the necessary knowledge to regulate and promote the projects.
  - ▶ Training for those who run urban farms and engage with the community.
  - ▶ Recognition that urban farming ought to be a priority for the environment, for community life, and for food security.

## QUESTIONS TO CONSIDER

### 1. How can I affect decisions early enough?

It is often easier to impact the planning process at its earlier stages, before vested interests have become entrenched. Finding the right stage and timing to intervene, and choosing the right rationale for intervention, can positively affect your chances of success.

### 2. How can I empower local communities to take initiative?

Local communities may be best acquainted with conditions on the ground but they may need both financial and professional support from those who are better versed in environmental campaigning. Both the [Sheli Fund](#) (which ceased its operations in 2014) and the [Tal Fund](#) supported environmental grassroots activism, but the recent shift in funding will require other funders to step in. Another way to support these communities is through national environmental organizations that [support local community efforts](#).



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# 4 Environmental Health

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*This chapter:*

- Examines the effects of pollution and natural resource management on the urban and natural environments (mentioned in previous chapters), on the health of Israeli citizens, and on the well-being of Israel's natural capital.
- Outlines how mitigating pollution can contribute to the resilience and prosperity of the economy as a whole.
- Explores initiatives for limiting Israel's air, water, and soil pollution, thereby protecting the public from health risks and other environmental threats.
- Describes alternative approaches to natural resource management in Israel that aim to increase biodiversity, improve soil fertility, alleviate pollution at its source, and support smarter and cleaner use of Israel's natural capital.

*The examples in this chapter are for demonstration purposes only. For further information on this topic please consult with JFN.*

## BACKGROUND

Environmental protection is critical for human health. Yet, while parents are spending a large portion of their income to limit their children's exposure to dangerous chemicals in food and other products – environmental degradation is still not perceived by the general public as a major and immediate health concern. Environmental health explores the connection between environmental impact and public health, as well as the quality and sustainability of the country's natural resources. While many efforts to tackle pollution have been implemented throughout the years, Israel is still lagging behind the global discussion on the direct and indirect implications of environmental degradation on human well-being and the sustainability of the resources available to society. The following introductory background note outlines some of the key issues relating to the quality of water, air and soil in Israel.

### Water

Israel's geo-climatic conditions exert extreme pressures on its limited water resources. Despite the country's advanced irrigation technology and impressive rates of water reuse, [various reports](#) conclude that in other areas, such as the local use of groundwater, many practices are still unsustainable. One challenge is that vital sources of water, such as the [coastal aquifer](#), face growing threats of pollution. Another challenge is an evolving national dependence on [desalinated water](#). Israeli desalination plants are considered relatively energy efficient. However, they tie the price of water to fluctuating energy prices. They also involve a host of indirect environmental effects, the extent of which is still unclear. For example, it is not yet fully known how these desalination plants affect coastal biodiversity. Nor are the [health effects](#) of desalinated water, with its low magnesium content, sufficiently understood.

## Air

Air pollution is often described as a quiet killer. According to the World Health Organization, [some 7 million premature deaths](#) were linked to air pollution in 2012, constituting one in eight of total global deaths. About 2.6 million of reported deaths are related to outdoor air pollution, which [can result in diseases](#) such as: heart disease, stroke, chronic obstructive pulmonary disease, lung cancer, and acute lower respiratory infections in children.

For this reason, the [United States](#) and the [European Union](#), for example, stringently monitor and regulate air quality (e.g. clean air policies). About [2,500 people are estimated to die](#) in Israel annually as a result of exposure to air pollutants. Israel, however, lags behind other developed countries in establishing a regulatory framework. Israel's 2008 [Clean Air Act](#) came into force in 2011, and the national [clean air plan](#) was approved in 2013.

But implementation has been hampered by competing national budgetary issues. Israel's population and economic growth rates, moreover, translate into increases in the demand for energy and transport, which in turn translate into heightened levels of air pollution, especially in urban hotspots.

This can perhaps be illustrated by what we might call a Yom Kippur-Detox index: Every Yom Kippur, as all transportation shuts down for the day, [the country undergoes an air pollution "detox"](#). The gap between regular emissions levels and those measured on Yom Kippur offers a unique insight into the potential impact of reducing [pollution from transportation](#) (also see [Chapter 2 – Creating Flourishing Cities](#)).

As reports by the [World Health Organization \(2014\)](#) and an [OECD review \(2011\)](#) indicate, some air pollutants' concentrations frequently exceed limit values for the protection of public health in Israel. This, as will be explained, bears both physical and fiscal costs.

## Soil

All forms of development—from agriculture and industry to homes and schools—depend on healthy soil. [Soil pollution affects our health](#) in numerous ways: it contaminates our food, pollutes the air-borne dust we breathe, harms the air in our underground spaces, and renders precious groundwater unusable for drinking or bathing. But recent surveys conducted on behalf of the Ministry of Environmental Protection ([2011, 2014](#)) have identified hundreds of contaminated sites throughout the country. The surveys identified 23,000 focal points where polluting activities cause (or may cause) contamination.

The causes for this pollution are clear: they include improper disposal of industrial and hazardous waste and wastewater, and mismanagement of waste sites. For example, [a survey](#) conducted by the Tel Aviv regional office of the Ministry of Environmental Protection found that 93 percent of gas stations in the city contaminated the soil on which they operate.

Clean-up is costly. According to the latest estimate, remedying all contaminated sites and preventing future contamination at other sites in Israel would cost approximately NIS 9 billion. Such high costs, together with complications due to unresolved issues related to liability for "legacy" pollution from the past, have slowed progress. All the more so because [one of the major polluters](#) is [Israel Military Industries \(IMI\)](#).

The scarcity of land in Israel, and the growing demand for it (especially in the center of the country), create positive pressures to address the problem. However, comprehensive new legislation necessary to reduce soil pollution has not yet passed in the Knesset.

## DESCRIPTION OF INITIATIVES

### Preventing pollution

- 1) **Informing the public** - Environmental health campaigns depend primarily on public awareness of potentially harmful phenomena. Some examples of effective initiatives in this area include:
  - ▶ Israel has for decades been enriching drinking water with fluoride. After environmental organizations questioned the policy's necessity and efficacy, the Ministry of Health eventually abandoned the practice.
  - ▶ Civil society aims to limit pesticide use in Israel through expanding awareness. For example, by organizing public conferences that coincide with related global events such as Pesticide Action Week.
  - ▶ An initiative provides an organizing platform for information on environmental health, including government decisions, reports, and scientific research.
- 2) **Closing the expertise gap** - Several initiatives address the expertise gap in government and civil society by building an enhanced research capacity in Israel. These include:
  - ▶ Short courses on topics in environmental health led by international researchers and conducted in Israel.
  - ▶ Short courses abroad that offer an array of training options for a wide spectrum of professionals and researchers.
  - ▶ Fellowship programs that place young professionals in government ministries, including the Ministry of Environmental Protection and other ministries with environmentally-minded positions.
- 3) **Accelerating research** - Some initiatives provide doctoral fellowships for students at Israeli universities and post-doctoral placements with leading international research groups. These can help conduct local research on the epidemiological effects of pollution in Israel. For example, one research team found evidence of the adverse health effects of elevated pollutant levels in central Israel among heart patients. Environmental-health research can further emphasize the public health threats from pollution, and can support efforts to quantify and mitigate costs related to pollution.
- 4) **Professional reports to inform decision makers** - Cooperation between the Environmental and Health Fund and the Ministry of Health on environmental health issues paved the way for the publication of Israel's first Environmental Health Report in 2014. It reviewed the current status of eleven issues, including air pollution, pesticides, chemicals in goods, radiation, chemicals in drinking water, etc.



## Reducing risks

On December 3, 2014, a [crude oil pipeline from Ashkelon to Eilat](#) suffered a [breach](#) in close proximity to the precious [Evrana nature reserve](#) in the Arava Region. Millions of liters of oil spilled into the reserve, threatening indigenous flora and fauna. Although not the first oil spill in Israel, the sheer magnitude of this disaster caught most off guard. It was the kind of outlier that Nassim Nicholas Taleb calls a “[black swan](#).” The initial cost of clean-up, which is expected to rise, already includes a NIS 17 million plan to rehabilitate the Arava region. In violation of the “polluter pays” principle, the bill will be footed from public funds. While the Evrona oil spill is already considered the worst environmental disaster in Israel’s history, a similar breached pipeline event in a populated area would have resulted in a major environmental health catastrophe. [Thus, preventing the next environmental “black swan” has become a major priority.](#)

**1) Ensuring environmental oversight and transparency** - The Eilat-Ashkelon Pipeline Company ([EAPC](#)), which transports crude oil between the Red Sea and the Mediterranean, has been operating for decades under a special license granting it both immunity from environmental regulations and oversight, and exemptions from zoning and building laws. Because the state comptroller reports on the company have been censored, there is no mechanism to ensure transparency of its operations. As a result, not a single lawsuit has been brought against the company for negligence or mismanagement of breached oil pipelines.

In the wake of the [devastation of the reserve](#), both the environmental movement and others in the media and civil society are demanding to increase the company’s [accountability](#) and transparency, and to revoke its immunity so as to [prevent similar events from occurring in the future](#). The [first appeal](#) to the High Court of Justice requesting the immediate removal of the immunity granted to EAPC since 1968 was filed in late December 2014.

**2) Addressing clear and present dangers** - In 2013, the Israeli government [decided to move](#) a 12,000-ton capacity ammonia tank, privately owned by Haifa Chemicals, from the Haifa Bay to the south of Israel. The tank had long been considered a severe hazard to residents of Haifa, due to its proximity to residential areas. The decision followed years of protest and struggle on behalf of local groups and [environmental organizations](#), and countless hearings in the Knesset. However, due to the elections, announced late 2014, the decision has been [delayed](#), necessitating continued efforts on behalf of the environmental movement.

The Kishon River was also at the center of public attention as many IDF Navy Seals scuba diving in the river developed cancer which was later attributed to the severe pollution in the river. In addition, other fatalities were also tied to [pollution in the Yarkon River](#) following the disastrous collapse of a pedestrian bridge into the river during the 15th Maccabiah Games. While [extensive rehabilitation has been conducted](#), addressing potential dangers of pollution is critical.

**3) Managing hotspots** - In 2014, the [cancer registrar](#) of Israel’s Ministry of Health once again listed the Haifa-Acre area as a cancer cluster in Israel. The same year, Haifa topped the Ministry of Environmental Protection’s [air pollution list](#). The environmental movement constantly strives to raise public and

governmental awareness to [curb pollution levels](#) in the area.

## Sustainable management of natural resources

Israel's discovery of natural gas fields along its Mediterranean coast has put it at a crossroads. As regulations are being formalized, it is a critical time to safeguard public interests against heavily lobbied commercial interests. Environmental organizations and local groups are playing a crucial role in shaping the new energy regulation regime. An important consideration is who benefits from the country's natural resources. This is discussed at length in *Chapter 5 – Environmental Social Justice*.

- 1) Revising the outdated oil law** - Current [regulations](#) on the [oil and gas market](#) date to 1952 and 1953. These are broadly criticized for not including adequate [environmental safety](#) checks and balances, and for lack of transparency. In order to increase scrutiny and environmental standards, the environmental movement filed [white papers](#) and briefs detailing the risks associated with current practices, pointing to potential regulatory gaps and [conflicts of interest](#) in the current regulatory framework. They also raised awareness on [possible environmental impacts](#) and their estimated costs for the public. Efforts are also underway to ensure that all future oil operations and permits are conditioned by environmental surveys and [financial securities](#), as required by law.
- 2) Blocking potentially hazardous commercial activity** - [The Valley of Elah](#) was [declared](#) a nature reserve this year, after a long struggle to prevent experimental fracking in it. In response to a plan by a [commercial concern](#) to conduct the first oil shale fracking procedure in Israel, a "green coalition" was formed to protect this historically and environmentally significant site. The coalition called attention not only to the direct environmental impacts of fracking but also to the [tremendous amounts of water and energy](#) that mining oil shale requires.
- 3) Supporting residents in voicing concerns through available legal channels** - A recent case illustrates how legal tools can prevent harmful pollution. Environmental [NGOs](#), together with local residents, filed a petition against oil drilling operations in the Golan Heights. The court issued an order for the temporary cessation of any [drilling in the region](#), in order to enable the government to address issues of concern, including the risk for Israel's water resources. Residents and environmental organizations also requested clarifications [regarding environmental impact assessments](#) for oil and gas explorations, and regarding enforcement of legally required [financial securities](#) in oil and gas explorations.

## CHALLENGES FOR FUNDERS

- 1) Reframing the debate and making the data accessible** - Although a wealth of newly available data exists on the health impacts of pollution and on environmental health in general, there is significant room for improvement in the communication of this information to all sectors of Israeli society. Little or no information is available in Arabic, English, Russian, and Amharic on environmental health, sustainable consumption, and other environmental issues.
- 2) Forming new regulatory regimes and implementing those that are in place** - Regulations are still being formalized around key issues such as soil contamination. Additionally, in many areas, key compliance

and implementation deadlines are not being met. Funders can help organizations ensure that the government acts in accordance with the law.

- 3) **Unifying environment and health efforts** - There is currently no single dedicated authority responsible for environmental health in Israel. As a result, initiatives in this area require the cooperation of different organizations from diverse fields of expertise. Key efforts related to environmental health have been put on hold for lack of funding.
- 4) **Preventing conflict of interest in environmental decision making** - In some cases, business interests may align with environmental causes. In most cases, however, a comprehensive social-environmental assessment is required in order to manage the environmental impact that Israeli businesses may have, and to weigh commercial interests versus public interests. In some cases, for example in the proposed regulation on offshore oil and gas production, economic interests are not separated from health, safety, and environmental considerations in granting licenses and in regulation; causing a potential conflict of interests.

## WHAT FUNDERS CAN DO

- 1) **Support environmental-health public awareness** - Various Israeli initiatives focus on monitoring and reporting pollution levels. Some publish [pollution level maps](#) for the public together with information. But this information is still not processed and repacked enough for the general public to be able to use it. Meanwhile, 2013 saw the launch of Israel's [Pollutant Release and Transfer Register \(PRTR\)](#), a national environmental database that details emissions of pollutants released to the air, water, and soil, as well as those transferred off-site for treatment or disposal. The governmental PRTR [site](#) facilitates public access to data and information on pollution. Nevertheless, the use of the data is currently neither maximized nor adapted to particular communities, as is commonly done in the United States. This offers funders a high-impact opportunity to ensure that information is provided in various languages and can better serve to keep communities informed. There are best practices on communicating information and data on environmental-health related issues which are not currently being implemented in the environmental sphere in Israel, though several initiatives in the environmental movement are already making a change (see [Chapter 6 - New Frontiers in Environmental Innovation](#)).
- 2) **Cultivate local know-how** - Currently there is no dedicated research center or policy think tank which specifically focuses on this interdisciplinary field. Supporting the establishment of such a center could enable the topic to become part of the local Israeli agenda. Funders can also support efforts to quantify the direct and indirect costs of pollution on public health, and on the viability of land for development. Such studies clarify how environmental burdens translate into economic burdens elsewhere, for example in increased health expenditure. Local knowledge and data can be cultivated by bringing in international expertise, and by providing a meeting point for multidisciplinary applied research in health and environment.
- 3) **Expedite transition** - Israel's environmental health must be bolstered before it can leapfrog from

a transition economy to developed country status. Israel joined the Organization for Economic Cooperation and Development (OECD) in 2011. A third of the organization's recommendations to member countries are [environmental recommendations](#), which reflects how the developed world considers a country's environmental health as integral to its development and quality of life. Accordingly, in joining the OECD Israel has also upgraded the environmental standards by which its quality of life is measured. The OECD's [environmental performance review of Israel](#) (2011) underlined the many gaps in environmental performance in the country and made a series of recommendations, including some discussed earlier in this chapter. This independent review was instrumental in highlighting current challenges and evaluating progress over the past decade. Today it remains crucial to support the environmental movement's efforts to close the legislative gaps, for example on contaminated soils, and to create a [comprehensive legal framework](#) to protect the Mediterranean from emerging threats.

**4) Make polluters pay** - In 2008, the Social-Environmental Caucus in the Knesset passed the [Polluter Pays Act](#). The legislation aims to prevent damages to the environment and public health by ensuring that companies that pollute bear the costs of their pollution, including [fines](#) up to NIS 2.4 million and prison sentences of up to three years. Yet in many cases legal action is taken only by civil organizations and local initiatives by concerned citizens who are directly affected by pollution. Funders can strengthen deterrence by supporting efforts to make polluters pay and by arousing public interest in cases where polluters enjoy immunity, such as in the Arava oil spill.

**5) Translating concern into action** - Both the public as well as funders are often confounded by the alarming scale and scope of environmental health issues. How to turn the knowledge about these issues into practical actions to resolve them is often unclear. Global best practices are available; however raising concern regarding known environmental health threats requires a balance between effective communication strategies and possibly alarming and debilitating messages. One key solution is providing tangible action items people can relate to and implement in their daily lives and in targeted campaigns.

## QUESTIONS TO CONSIDER

1. How does Israel compare to other developed countries in environmental policy? In what areas is regulation missing, ineffective, outdated, or unenforced?
2. In what ways can Israel adapt a best practice from another country in order to address the gaps we have identified? How can I as a funder help with this adaptation?
3. What alternatives are available for citizens affected by environmental challenges? What roles can NGOs take to provide viable alternatives?
4. How can an environmental initiative be enhanced by collaboration and creative partnering (among funders, NGOs, government agencies)?
5. How can we best assess an initiative's impact on public health in Israel, and how can we quantify the savings on health expenditure?

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# 5 Environmental Social Justice

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*This chapter:*

- Makes explicit the connection between social and environmental problems and goals. It explains how values such as equality and diversity manifest in each of these realms, and how looking at the social aspects of environmental problems can help safeguard both environmental health and social resilience.
- Examines how social exclusion related to the environment marginalizes vulnerable individuals and communities.
- Reviews the implications of Israel's newly discovered gas resources for questions of social and intergenerational justice.
- Outlines how empowering communities and assuring equal allocation of resources and proportional distribution of burdens can contribute to economic prosperity.
- Explores initiatives for improving the access of communities to resources, infrastructure, services, and information, and explains why such access reduces susceptibility to environmental risks.
- Introduces innovative business models and initiatives that seek to establish alternative approaches to natural resource use.
- Details opportunities to leverage environmental causes as a platform that can nurture co-existence of different parts of Israeli society.

*The examples in this chapter are for demonstration purposes only. For further information on this topic please consult with JFN.*

## BACKGROUND

The countrywide [social justice protests](#) that brought hundreds of thousands of Israelis out to the streets in 2011 placed social justice in the forefront of the public agenda. Regardless of the [discussion](#) surrounding the scope, outcomes, and successes of the protests, a change in [discourse](#) and perception of public participation has already made itself evident around the country. This chapter aims to broaden the discussion in such a way as to include environmental justice as a crucial dimension of environmentalism.

Environmental justice may be defined as “the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.”<sup>25</sup> According to this definition, justice is achieved when “everyone can enjoy the same degree of protection from environmental and health hazards and equal access to the decision-making process to have a healthy environment in which to live, learn, and work.”

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25 From: US EPA, available online at: <http://www.epa.gov/environmentaljustice/>

As the conversation about environmental justice has gained momentum, so has a parallel discourse on quality of life. It is now commonly agreed that GDP alone cannot suffice as an indicator of well-being. Additional indicators are being developed globally and in Israel, and include specific indicators on environmental quality and social justice. This shift further underscores the need to take a multidimensional approach to human well-being (see figure below). Some activities may contribute to GDP even as they reduce quality of life. For example, higher transport costs due to increased congestion and longer commuting. These are marked as “regrettables” in the diagram below.

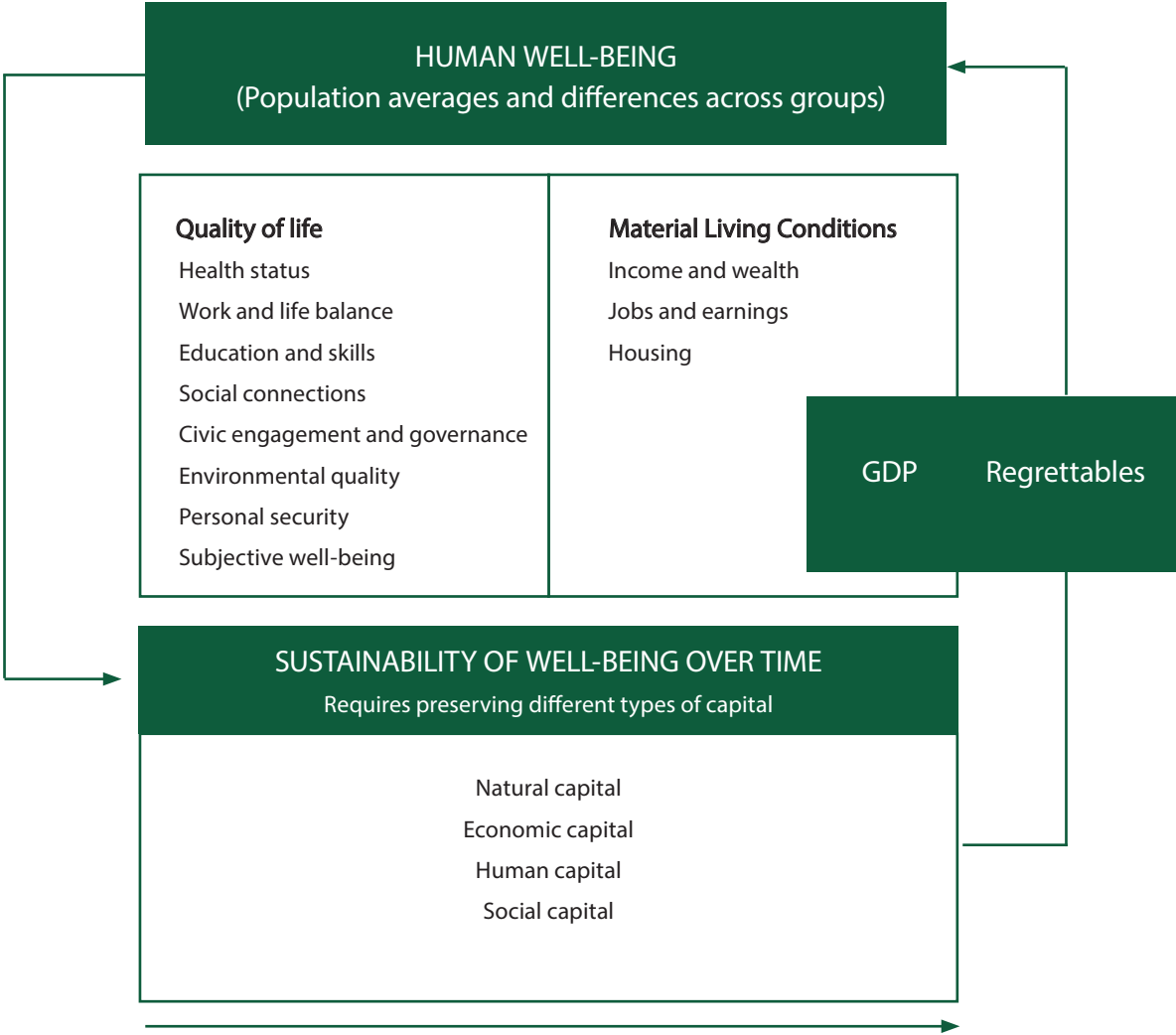


Figure 2. Multidimensional Human Well-being, OECD 2011 (source)

## DESCRIPTION OF INITIATIVES

### Bridging the access gap

Those who have access to environmental services, information, infrastructure, transportation, and participation also enjoy a higher quality of life. Conversely, a lack of access may augment marginalization in many other areas, such as health or the ability to participate in the workforce. For example, a lack of access to waste management or wastewater (sewage) treatment can lead to detrimental health risks. The lack of waste infrastructure in Bedouin communities, to be more specific, [has led to practices of burning waste or dumping it into nearby streams](#). This in turn pollutes the air and contaminates groundwater, with hazardous effects for the community.

- 1) Advancing equal and accessible environmental services** - In Israel today, there are great disparities in the provision of environmental services between different segments of the population. For example, one [report](#) (2013) indicates that despite significant improvements in wastewater treatment, only 2.5 percent of wastewater is discharged in Jewish municipalities, 14.7 percent in mixed municipalities, and 21.8 percent in Arab municipalities. Meanwhile, waste remains a major problem for Israel's Bedouin communities.<sup>26</sup>
- 2) Promoting access to public transportation** - According to the 2013 [report](#), Arab villages have significantly less access to public transportation, with an average of 8.59 buses per 1,000 people compared with 20.65 buses per 1,000 people in Jewish towns and cities. Research has shown that access to public transportation is essential in reducing social exclusion and marginalization. In Israel, the lack of access to transportation [especially affects Arab women](#) and has resulted in a double social exclusion: both as Arabs and as women. [Initiatives](#) working towards providing transportation alongside child services [support Arab women's social inclusion](#), especially in rural areas.
- 3) Identifying gaps in access to public open spaces** - [According to a report which reviewed over 200 municipalities](#), Arab villages have on average only 0.34 public open spaces per capita compared with 7.36 public open spaces per capita in Jewish municipalities. Low and middle-income towns also suffer from [environmental injustice](#). Of the 54 municipalities with the lowest rates of access to public open spaces, only one is a higher income municipality. High-income towns and cities comprised 19 out of 20 of the municipalities with the highest access to public open spaces.

A 2013 [planning guide](#) for urban public gardens occasioned much [controversy](#) for allocating 10 square meters per resident in Arab and religious municipalities and 15 square meters of gardens per resident in Jewish municipalities. Some saw this as [planning discrimination](#). The government countered that the guide merely reflected adjustments to different communities' needs and preferences. Yet a previous [planning guide](#) managed to adapt gardens to local needs without quantifying differences between sectors.

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<sup>26</sup> In the Negev, not one of the seven "recognized" Bedouin towns (i.e. considered legal by the authorities) or about 50 "recognized" villages has ever had a proper waste collection system. The health hazard and general situation in the "unrecognized" villages has proved [even worse, with no waste collection or treatment system in place](#). One [initiative](#) spearheaded work to establish waste management systems in Bedouin communities, in addition to water and electricity connections. In 2013, the government recognized the urgency of the problem and directed some NIS 40 million for waste management in the southern Bedouin sector. This step entails a dramatic and direct impact to the lives of some 200,000 residents. Additional government [legislation and funding](#) was approved in 2014 as part of the "Equality in the Environment" program promoted by the Ministry of Environmental Protection.

It is clear that all segments of society stand to benefit from the expansion of public open spaces. Examples of initiatives working towards the expansion of open spaces and urban nature are can be found in [Chapter 2 – Creating Flourishing Cities](#).

- 4) Paving paths to public participation** - Civil engagement and public participation can take place in different ways including: informing the public, holding public hearings and consultations, and fostering a meaningful partnership between government agencies and the public. The scale of these can provide an [indicator](#) for the well-being and resilience of the economy and the country as a whole.

One [initiative](#) works to [secure through legislation the ability to participate](#) in the planning process regardless of socio-economic background. Another [initiative](#) strives to make government fully accountable to the public, to provide citizens the tools to participate in informed decision-making, and to facilitate such public participation as a matter of course. In order to enable such participation, the initiative aims at improving civil literacy and skills so that citizens can engage in cogent debate and organize their communities in pursuit of a common goal. For example, its [Open Knesset](#) project makes the Knesset legislative activity publicly accessible on a user friendly website.

## Empowering communities

Economically vulnerable communities are often the most susceptible to environmental risk. Since such communities may lag behind in scientific literacy, legal and advocacy capacity, funding, and access to information, this presents particular challenges to addressing their problems, such as sewage, asbestos, waste, air pollution, and overdevelopment. Yet there is much that can be done.

- 1) Providing scientific and legal support** - One [initiative](#) offers pro-bono legal, scientific, and urban planning expertise with the aim of empowering local activists and grassroots organizations to improve environmental conditions in their communities. The initiative operates a Green Alert ([Moked Yarok](#)) center which provides an accessible first-stop for citizens in search of guidance on local environmental threats. About a hundred new inquiries are received every month from citizens across Israel.<sup>27</sup>
- 2) Mapping gaps in emergency preparedness** - One [study](#) from 2013 mapped emergency preparedness in 27 Arab towns throughout Israel and found many of them under-equipped to cope with environmental and non-environmental emergencies such as wars, fires, earthquakes, and floods. For example, during the [fire in the Carmel Forests](#) in 2010 and the floods in Baqa al-Gharbiya and Taybeh in 2013, the study found that residents of Arab communities had to cope with a lack of critical emergency and rescue services and with grave shortcomings in emergency infrastructures.
- 3) Recognizing the unequal contribution to environmental degradation** - Environmental management requires significant resources. Reducing greenhouse gas emissions that lead to climate change, for example, is a costly endeavor. But different communities contribute to environmental degradation in different ways. One [position paper](#) on climate justice argues there are significant inequalities between wealthy and poor populations in Israel in terms of their greenhouse gas emissions.<sup>28</sup>

<sup>27</sup> The initiative includes an environmental justice team which conducts negotiations, issues pre-trial warning letters, and if necessary, launches lawsuits and formal planning objections. In such cases, community groups play a significant role in providing in situ (on site/local) evidence, anecdotal histories, and local data. In many cases, a single intervention will carry broad national implications. The initiative also publishes [information sheets](#) that address common concerns.

<sup>28</sup> For example, it shows that in terms of the categories of Domestic Electricity Consumption and Private Vehicle Use, carbon-dioxide emission functions as a multiplier of existing inequalities by approximately a factor of 4.

## Establishing the knowledge base

The field of environmental social justice is still in its infant stages in Israel, but various initiatives are beginning to establish a knowledge base. Doing so is crucial for debating how environmental justice parameters are evaluated. For example, stakeholder engagement is crucial in establishing criteria for evaluating risk, identifying locally relevant indicators for Israel, and so on. In the absence of these indicators, data may conflict.<sup>29</sup>

## Innovative business models

Innovative business models can forge promising alternatives, for example, by leveraging the growing demand for “green jobs” to create employment opportunities for people with disabilities. They allow funders to engage in **impact investing**, investments aiming to have a social and/or environmental impact as well as a financial return.

- 1) Creating an alternative cultural consumption model** - Social environmental businesses can be defined as revenue-generating business models that advance societal goals and provide socially and environmentally constructive services. Cooperatives offer one example. In their broadest sense, economic cooperatives are based on a social, ethical, and at times environmental ideologies based on partnership and equality. Members of a consumer cooperative benefit from joint purchasing power.<sup>30</sup>
- 2) Leveraging the growing demand for “green jobs”** - “Green jobs” are expected to play an increasingly significant economic role as environmental services and management expand to meet environmental challenges. One unique **social environmental project** recycles electronic waste (computers, circuit boards, switchboards, and communication equipment) by employing people with disabilities. It creates much needed employment opportunities for a population largely left outside the workforce, while **contributing toward solutions to the e-waste problem in Israel**. The project coordinates between companies, production plants, and local authorities who are interested in promoting environmental protection, on the one hand, and rehabilitative employment agents for people with disabilities, on the

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29 Determining the proximity radius of some Bedouin communities to the hazardous waste site of **Ramat Hovav**, for example, relied on different data at different points in time. Older epidemiological studies found a link between the proximity to the site and health indicators such as higher abortion rates, thus putting a minority marginalized community at high environmental risk. More recent studies by the Ramat Hovav park, however, deny correlation between proximity and health degradation. Such examples show that working to develop the knowledge base remains crucial (more information on this issue can be found [here](#)).

Two other examples of establishing the knowledge base deserve mentioning:

- 1) The **Optimism Report** (March 2015)

The Optimism Report reviews, screens and outlines numerous successful initiatives in Israel, with the aim of making regular updates accessible. In the review stage, the authors identified 14 key principles for success which provide a useful framework for future analysis, evaluation and discussion. These assess the degree to which an initiative:

- o Increases social capital and reduces injustice.
- o Relies on sustainable resource management principles.
- o Can be replicated.
- o Inspires action that goes “upstream” to the source of the problem, rather than simply alleviating some symptoms downstream.

The report argues that learning from success opens a door to the future and enables the reframing of issues and focus on results while generating optimism.

- 2) Building specialized expertise

One Israeli association **dedicated to environmental justice** focuses on how in an inter-connected society, environmental decision-making can strengthen democracy, equality and environmental justice. In addition, the initiative aims to promote active deliberated civic participation, specifically focusing on participation of minorities and residents of the periphery. It collects data, conducts research, produces position papers, and develops policy instruments.

30 Various cooperatives have been formed in Israel in the past few years. One consumer cooperative project runs **a shop** based on principles of solidarity, fair prices, transparency, and sustainability. The shop charges the cost price of its products in addition to an additional 25percent for general products, 35percent for fruits and vegetables, and 20percent for basic goods. These charges go to cover the shop’s operating costs. The small profit margin of around 5percent is reinvested in opening additional shops.

other.

**3) Servicing and sharing economy - Servicing** is a transaction where value is provided through combination of products and services. Satisfaction of customer needs is achieved by selling the function of the product rather than product per se and/or by increasing the service component of the offer. Car sharing and **bicycle sharing** schemes in Tel Aviv provide alternatives to the city's public transportation network. However, such **car sharing programs** have remained mostly on an individual consumer level and have not penetrated business and governmental fleets. They afford those without a car to have access to one when they need it, significantly reduces the need for a second family car, and presents a model for reducing emissions by reducing the number of cars on the roads.

## Nurturing co-existence

- 1) Academic studies in Israel with regional partners - A research institute** in the south of Israel hosts a student body comprised of Jordanians, Palestinians, Israelis, and international students. The institute offers students the opportunity to learn from leading academics and professionals while forming friendships that can enable them to become environmental leaders and promote regional cooperation.
- 2) Youth research and joint projects - An educational center situated in an ecological greenhouse in Kibbutz Ein Shemer** serves dozens of schools in the Menashe and Wadi Ara area and hundreds of educational institutions around the country. It hosts social encounters with a dual social-environmental mission of engaging students in interdisciplinary study of environmental ecology as well as the social ecology of the country. Students meet specialists from academia and industry, learn from their experience on research, professionalism and science, and produce projects on topics such as the cultivation of micro-seaweed, bacteria, plant-based and technological water treatments, precision farming, biological pest control, fish and zooplankton farming, and biomimicry (technological solutions inspired by nature). The greenhouse creates a unique meeting place for youth from a diversity of backgrounds: Jews and Arabs, religious and secular, native Israelis and new immigrants, gifted children, at-risk children, and children with disabilities.
- 3) Leading by example - Another initiative** in the Negev works collaboratively in a multicultural setting in Beer Sheva to safeguard Israel's environment by creating replicable grassroots models of sustainable urban development. It uses hands-on environmental education to develop social and economic paradigms that support dignity and respect. It aims to build local self-reliance.
- 4) Teaching mutual respect and environmental citizenship - One new initiative aims to provide professional training for teachers and accompany children through dedicated school programs** on social and environmental sustainability and mutual respect principles. It emphasizes the link between human interaction and environmental citizenship. By means of age-appropriate games and interactive tools, it enhances children's abilities to contribute to their communities.

## Ensuring just distribution of natural capital

For many years, Israel was considered to be poor in natural capital and had to import the vast majority of its materials and resources, from metals to fuels. In addition, the country has been characterized by land and water scarcity. Recently, however, this situation was changed by the discovery of large offshore [gas reserves](#) in the Mediterranean. The discovery has challenged the country to create a sound resource management, and has already led to broad rethinking of the management of other natural resources like phosphates and aggregates. The question of what level of royalties from natural resources is appropriate has spurred a [heated public discussion](#). How these and discussions translate into a just distribution of resources, for this generation and future generations, remains to be seen.<sup>31</sup>

## CHALLENGES FOR FUNDERS

- 1) Supporting a new, growing agenda** - Environmental social justice, while familiar in the U.S., is a relatively new concept in Israel. Many social justice efforts do not yet attend to questions of environmental social justice. For example, efforts to boost employment for people with disabilities rarely consider environmental opportunities. Health related efforts can benefit tremendously from environmental quality data on pollution and risk from hazardous materials, for example.
- 2) Locating the appropriate arena for change** - Certain initiatives which are pressing on a community level could be resolved locally with immediate benefits to the well-being of the community. Examples include: asbestos risk in public areas, waste in the local woods, and sewage in playgrounds. Other larger scale issues, however, which may recur in many different communities, require national initiatives.
- 3) Helping small and nascent initiatives** - Many community-based efforts begin with concerned citizens who lack an organized platform, and are therefore difficult to identify. A fund that had supported these efforts with micro-grants (Sheli Fund) has been discontinued.

## WHAT FUNDERS CAN DO

- 1) Expand social initiatives to include environmental social justice** - Addressing environmental social justice offers the potential to dramatically affect other parameters of inequality, such as health and participation in the job market, as well as the opportunity to improve the quality of life of vulnerable communities and individuals. For example, work on improving health in marginalized communities can leapfrog by identifying potentially hazardous environmental risks, such as asbestos, pollution from illegal waste dumping, and soil contamination.

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31) Examples include:

- 1) An initiative [working on distributional justice of land in Israel](#) conducts a “[land watch](#)” that monitors planning and land development.
- 2) Initiatives related to gas and (potentially) oil weigh the royalties and the societal and intergenerational [distributional aspects](#) of the benefits and burdens of gas. They also examine the infrastructure and development required for its production and use.
- 3) Other natural resources: The [Sheshinski II Commission](#), responsible for examining the use of additional natural resources in Israel, had a limited mandate to consider royalty and tax policies. It reviewed minerals and mud from the Dead Sea, mineral water, metals, quartz, gravel, clay, gypsum, and limestone, among others. Initiatives included professional reports submitted to the commission. A report on [gravel](#), for example, recommended a 6 to 8 fold increase in royalties to the country. In addition, it conducted advocacy work to balance heavy corporate lobbying.

- 2) **Encourage data collection and research on environmental social justice** - A major knowledge and data gap currently acts as a barrier to addressing social environmental exclusion and marginalization. Bridging this knowledge gap could impact a plethora of future initiatives by NGOs, communities, and policymakers. Funding opportunities include: supporting academic and policy research, expanding ongoing surveys on social justice to include social-environmental justice parameters, and continuing efforts on indices of initiatives in the field.
- 3) **Support social-environmental businesses such as cooperatives and “green jobs” programs** - Businesses that promote both social and environmental causes provide win-win opportunities, but they often struggle to develop a sound and sustainable business model. Funding business management and development guidance could complement the enthusiasm, dedication, and inspiration which are available in abundance in these initiatives.
- 4) **Support local groups directly** - As the [Green Alert](#) statistics indicate, there is a great demand for guidance among community groups and individuals facing an environmental problem. The scale of such local initiatives may be small, but the environmental issues they confront have dramatic effects. The [Sheli Fund](#) provided micro-grants to hundreds of grassroots environmental activists and local ventures fostering bottom-up change. These initiatives would normally not be able to move forward without modest support, and yet do not qualify for larger support schemes. Creating a new support mechanism to replace this discontinued fund would have an invaluable impact.
- 5) **Leverage government matching mechanisms** - Large-scale impact can be achieved through partnerships with local and national government bodies. The Israeli government has various support mechanisms which require matching from a partner organization. Environmental justice, having recently been selected as a priority area for the Ministry of Environmental Protection, can provide an excellent area for such joint ventures and multifaceted efforts. They can also impact the national economic-environmental agenda. On questions of distributional justice, for example, [advocacy efforts have already changed the balance](#).

## QUESTIONS TO CONSIDER

1. How can environmental initiatives and campaigns build a bridge between different communities in Israel and in the region?
2. How can we ensure that all communities enjoy the same level of access to environmental protection, infrastructure and services?
3. How can we build a more just economy, where natural resources are not appropriated by few, and environmental and social concerns drive value creation?



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# 6 New Frontiers in Environmental Innovation

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*This chapter:*

- Looks at new strategies for environmental change that promote the goals mentioned in the previous chapters: creating flourishing cities, safeguarding Israel's natural heritage, protecting environmental health, and promoting environmental justice.
- Defines the meaning of environmental innovation and different paths by which it can be achieved.
- Offers examples for successful innovation in environmental planning, business models, scientific activism, and engagement with the private sector, restructuring the food system and inspiring behavioral change.

*The examples in this chapter are for demonstration purposes only. For further information on this topic please consult with JFN.*

## BACKGROUND

Israel, dubbed by many “the start-up nation,” is widely admired as a hub of innovation and experimentation. Yet its talent for nurturing new technologies and ideas extends beyond profit seeking. Countless Israeli entrepreneurs are creating businesses and initiatives that address some of the world's most pressing environmental needs.

Examples of sustainability entrepreneurs working in this field include:

- ▶ Members of local planning committees creating new methods to evaluate proposed projects through a sustainability lens.
- ▶ CEOs of large corporations looking at sustainability as a way to find new value and markets.
- ▶ Young professionals reshaping Israel's cities through small but impactful events and designs, and creating alternative visions for their streets and neighborhoods.

This chapter presents new ways for funders together with government representatives, environmental organizations, private companies, and activists to inspire environmental change. It differs from previous chapters in that it does not focus on a specific geography or environmental arena. Instead, this chapter looks ahead to ask: how does sustainability innovation arise, and what new prospects can we identify in Israel's blossoming sustainability enterprises? Thus it aims to paint environmental change with a broader brush, and to stimulate funders to think about the potential value they can add to a new field.

## INNOVATION IN PLANNING

The planning system plays a central role in shaping the space in which we live, protecting environmental values, and offering alternative solutions for environmental needs. [In-depth research](#) conducted in 2013 by some of Israel's leading scholars of environmental planning and policy aimed to identify how innovation occurs in the state's planning system. They found several dimensions that contribute to innovation:

- ▶ Institutional structures that promote innovation, such as a strong environmental regulatory system.
- ▶ Global environmental processes that enhance environmental awareness and civil participation in the planning process.
- ▶ The increasing professionalization of environmental organizations, which allows them to apply more effective monitoring and critique.
- ▶ Innovation among entrepreneurs and developers.
- ▶ Particular scholars who act as agents of change.
- ▶ A court system that enables environmental change.
- ▶ An open organizational culture.
- ▶ Individual leaders able to inspire innovation due to their role in the system or through the positive dynamics they are able to drive.

The researchers offer several key examples in which the planning system adopted environmental innovation both in the way it works (process) and in its products (the plans it creates and approves). One example is the [campaign against Highway 6](#) (also known as the Trans-Israel Highway), which severely interrupted the landscape and facilitated private car use rather than public transport. While the campaign failed to prevent the road from being built, environmental organizations and their allies in the Ministry of Environmental Protection and within the planning system persuaded others involved in the planning process to formally recognize environmental considerations in future proposals. The campaign also facilitated adoption of a mandatory two-part environmental assessment procedure.

Yet the planning process is often inaccessible to those most affected by its results. Grassroots planning initiatives give a voice to local residents, and create alternative plans that reflect the community's interests.<sup>32</sup> In south Tel-Aviv, the Onya Collective, a recent initiative by local designers and activists, is attempting to bring together different communities to rehabilitate one of the city's worst environmental eyesores – the New Central Bus Station. The station opened its gates in 1993, expecting to become one of Israel's leading malls. Instead, the cavernous building suffered from neglect, disrepair, and vacancy (its owners filed for bankruptcy in 2012), and became a major source of pollution.

In 2014, an independent collective formalized a partnership with the municipality, local citizen groups of different communities, including African refugees, social change organizations and residents of surrounding neighborhoods. They transformed several spaces within the station and adjacent to it, using

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32 For example: A [grassroots effort](#) in the Arab localities of Qalansawe and Yarka defined the community's present and future needs, compares existing plans to the community's own proposals, formulates expert opinion on the plans, and, if necessary, prepares legal objections.

both natural elements and cultural activities to reclaim ownership over public spaces. They created a small garden and concert space in what had been a closed and littered ramp, a public library at a crowded bus platform, and a hub for innovative urban interventions at the heart of the station, which they hope to turn into an innovative lab for urban experimentation. They also launched a long-term process with the residents, aiming to re-envision the building and its surroundings.

## USING SCIENCE COMMUNICATION AND INFORMATION TECHNOLOGY

Making environmental information readily accessible to policymakers, the media, and the public requires a good grasp of the way these audiences use social media and online platforms. The Israeli Association for Ecology and Environmental Sciences recently launched a new website that serves as a “[science and environment reporting agency](#).” The site serves as a self-proclaimed “one-stop shop” for research on environmental phenomena, interviews with leading experts, and information on scholars who can shed a scientific light on current events. The site seeks to provide objective data to journalists, and to prevent unfortunate mistakes in reporting stemming from a lack of scientific training. The association members who contribute to the site take workshops and training programs for science communication.

Another way to keep track of environmental policy is by following legislation and governmental programs and budgets. Following the social protest of 2011, several programmers used their skills to [open up Knesset discussions and governmental documents for the public](#). By mining the Knesset’s data, the site allows activists to track each Knesset Member’s votes, follow bills, and evaluate the parties’ performance on different topics. Other tools allow access and analysis of the national budget, city plans, and votes on bills initiated by the opposition at early stages of legislation. These initiatives claim public ownership of information that is crucial in influencing the political process. Other initiatives [harness the physical presence of activists in the Knesset](#) to report on committee hearings and rank Knesset Members’ records on social issues.

## INNOVATION IN TECHNOLOGIES AND BUSINESS MODELS

### An evolving clean-tech industry

Some philanthropists use [impact investing](#) as a complementary tool with their grantmaking as a way to diversify their portfolio or to use the returns as a way to fund more giving. Either way, the attraction is the same: to make money and achieve a measurable impact. Impact investing is essentially investments made in organizations, funds or companies with the intent to generate a social or environmental impact as well as a financial return. It includes for-profit companies that intend to have a social impact using their business model as well as non-profit organizations with independent revenue streams.<sup>33</sup>

Two factors contribute to Israel’s propensity for reaching [technological breakthroughs](#) that present new solutions to environmental problems. First, the country is a geopolitical island that has to rely on import and export for most of its natural resources and economic activity. Second, it must overcome climatic challenges to prevent water scarcity and enable a thriving independent food system. Long before climate change appeared on the global agenda, Israel mandated the installation of solar water heaters on every building, reaching a record 85 percent of households using solar thermal systems. It also developed a water recycling scheme that diverts 75 percent of used, purified water to agriculture.

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<sup>33</sup> For more information about impact investing in Israel, please contact the JFN Israel office.

Despite the fact that Israel's own renewable energy uptake rate is still fairly small in the electricity sector, the state supports a growing clean-tech sector that offers innovative solutions to countries and companies around the world. [The National Sustainable Energy and Water Program](#) helps local companies connect with potential investors and clients around the world, and maintains an index of hundreds of companies that focus on water and energy technologies. Many of Israel's clean-tech companies are uniquely positioned to help vulnerable regions adapt to the changing climate. The Ministry of Economy's Environmental Directorate [published a guide](#) to Israeli companies whose technologies can help decrease communities' energy needs, ensure a lasting supply of potable water, create a more resilient food system, and find productive uses for waste.

The [Fuel Choices Initiative](#) is another government-sponsored project that is expected to position Israel as a leader in environmental technological innovation. Administered by the Prime Minister's office, the initiative is budgeted at over NIS 1 billion over ten years. It aims to catalyze the reduction of global dependence on crude oil by establishing Israel as a center of knowledge and industry in the field of fuel alternatives. It brings together nine government ministries, as well as non-governmental support, to turn Israel into a testing ground for new propulsion technologies and alternative mobility models, and to reduce the share of oil in Israel's transportation sector by 60 percent by 2025. The initiative is closely linked to several academic and research institutions in Israel.

### Social-environmental entrepreneurs

Social businesses combine enthusiasm for social-environmental change with sustainable economic practices that ensure they can thrive independently. Unlike traditional private sector businesses, here maximizing profits takes a backseat to social impact. Several initiatives have been formed in Israel to promote social-environmental enterprises, including multiple centers for training new social entrepreneurs through peer learning and leadership programs (see [here](#) and [here](#), for examples). The Ministry of Environmental Protection also launched [a competition for social-environmental enterprises](#) in 2011. Contenders offered a wide range of initiatives, including:

- ▶ A website that allows local food growers to increase their access to clients.
- ▶ A plan to create a "green ring" - a series of parks and open spaces that would surround the Dan metropolitan area, connecting existing parks.

Even the high-tech industry takes part in the social-environmental business expansion. New apps developed in Israel allow users to create individualized social networks that [facilitate car-sharing](#). They enable community members to [map and monitor public recycling bins](#), informing the municipality when it needs to empty the bin, and helping users to find the closest bin. They even let you know where you should live or how to take your daily jog [based on real-time air pollution data](#).

## SUSTAINABLE CONSUMPTION

Each of our mundane choices affects the environment. Do we leave the computer plugged in? Do we commute by car or bus? What do we eat? While severe environmental problems require a concerted effort by our leaders and governments, each and every one of us must take part. For this reason, both the government and civil society put great effort into [affecting consumer choices](#), drawing insights from marketing and behavioral economics. A [policy brief](#) written for the Ministry of Environmental Protection defined the goals of a sustainable consumption strategy: reducing environmental impact, using resources more justly, preventing resource depletion, avoiding harm to the ozone layer and to biodiversity, cutting water, air, and soil pollution, reducing greenhouse gas emissions, and creating a more efficient economy.

Sustainable consumption and behavioral change initiatives often target specific audiences. They include, for example, an initiative aimed at [IDF soldiers](#), and a popular “[green radio station](#)” that offers “sustainable consumption tips” and dedicated programs with environmental content. Other sustainable consumption programs are topic specific, for example [campaigns](#) related to the use of plastic bags (complementing governmental [educational tools on the issue](#)), and programs that provide teachers with [related educational tools](#) such as presentations and lesson plans to promote more environmentally-minded water consumption and energy consumption, as well as other related topics.

Some changes in consumption habits require structural support. For example, in order to promote green building, companies must persuasively demonstrate the benefits of their energy and water savings technologies. The Knesset decided to lead by example with the [Green Knesset](#) project. It includes 12 energy and water related installations, including a 4,500 square-meter solar field being deployed on the Knesset’s roof. It is also cooperating with other parliaments to expand the initiative internationally.

The Ministry of Environmental Protection, in cooperation with the [Future Friendly Brands Clinic](#), has launched a Sustainable Communication Strategy which encourages consumers to act more sustainably at home, on the road, and while shopping. The message is communicated through an [interactive website](#) and commercials featuring one of Israel’s most popular comedians. Finally, the Ministry is working to [establish a new team](#) in the Prime Minister’s Office dedicated to implementing insights from behavioral economics to promote sustainable consumption. The team will build on the experience of [a similar unit in the UK](#), and on the success of [companies like O-power](#) that have lowered energy consumption by sending households data about their electricity bills compared to their neighbors.

Consumer choices can also affect adoption of benign environmental technologies:

- 1) **Gray water recycling** - [Water recycling](#) offers one example for high potential gains in resource efficiency. Gray water, having been used for activities such as bathing and washing clothes, can be treated and reused for flushing toilets or watering gardens, thus replacing the expensive and scarce drinking water that is currently used for such purposes. Institutional barriers have so far prevented Israel from joining many other countries where national gray water recycling programs protect water resources. Recently, however, in response to appeals from both environmental and commercial actors, the government initiated [pilot projects](#) in public institutions and supported a bill that would allow gray water technology to be installed in residential and commercial spaces.



**2) Renewable energy and energy efficient products** - Since Israel's earliest days, the government has actively encouraged and even legally required domestic solar water heating. Yet there is much room for improvement in terms of increasing consumption of more energy efficient products, for example by promoting green building. The environmental movement pushed for a bill that would require energy efficiency improvements in public buildings and properties. Although in 2011 the government approved a decision to promote a national energy efficiency plan, to date no such plan has been prepared.

**3) Electric vehicles** - The electric vehicle market in Israel is fairly untapped, and opens up possibilities of strengthening the urban infrastructure for electric vehicles; converting car and bus fleets to electric/hybrid propulsion; and converting sanitation trucks to natural gas propulsion. While previous attempts to establish a full electric charging grid for household vehicles [have not come to fruition](#), several public transport operators have expressed their interest in integrating electric buses in the coming years.

## CREATING A SUSTAINABLE FOOD SYSTEM

In 2014, a UN Special Rapporteur on the right to food [warned](#) that the global food system must adopt a new paradigm in food production and consumption in order to face the growing need for food, and to mitigate the social and environmental impacts caused by industrialized agriculture. One of his main recommendations was to decentralize food production, and to find a new way for cities to become an active part of the agricultural system. In Israel, urban farming is quickly spreading. Local initiatives create [community gardens](#) where residents can compost organic waste and use the compost to grow vegetables. Dedicated organizations are establishing urban farms like [the one in Beer Sheva](#), creating an alternative urban economy.

The UN report also emphasized the harms chemical use inflicts on our water and soil. One solution comes in the form of Integrated Pest Management (IPM) methods, also mentioned in [Chapter 3 - Celebrating Israel's Natural Heritage](#), which dramatically reduce pesticide use by introducing natural predators to control pest populations. Israeli companies have become market leaders in innovative IPM service packages, with the result that Israeli farmers export their produce to European commercial chains with higher standards on chemical exposure.

## INTEGRATING COMPANIES IN THE SUSTAINABILITY REVOLUTION

The private sector is a source both of environmental problems and of innovative solutions to those problems. Israeli companies increasingly [acknowledge](#) their corporate social responsibility (CSR), and the role of CSR officers in improving their operations and devising new sustainability strategies. After the 2011 social protest, the Israeli CSR community started looking for ways to position CSR at the heart of corporate activity. One outcome is the [Appropriate Growth Initiative](#), which develops new technological solutions and uses Israel as a beta-site for global solutions to the world's most pressing environmental challenges. According to [Maala](#), CSR is a process by which companies realize that they can "[do well by doing good](#)"—not just through attracting environmentally-minded consumers, but through the very business that drives its core profits.

Another path for corporate sustainability runs through a relatively new academic field called “industrial ecology,” which blends ecological thinking with engineering methods. Industrial ecologists find new opportunities for companies to eliminate wasteful processes and engage in collaboration with others, creating “[industrial symbiosis](#).” If one company’s waste becomes another’s raw material, for example, both gain economically, and the environment benefits from reduced waste and natural resource consumption. The Porter School of Environmental Studies at Tel Aviv University has recently launched [a new lab dedicated to industrial ecology innovation](#).

Another way to drive innovation in the private sector is through government regulation. [A survey of environmental innovation in Israeli manufacturing companies](#) found a notable improvement in environmental management in Israel, with manufacturers moving away from externally forced environmental compliance, to an environmentally-minded business strategy. The survey found that government regulation and enforcement create a minimal bar for environmental performance, but in certain conditions new regulations can also spur environmental innovation to higher levels. For example, conditioning license approval on fulfilling certain environmental requirements accelerated environmental innovation.

The Ministry of Environmental Protection is currently promoting an integrated green licensing law, which aims to streamline and simplify the process for existing environmental permits. Besides removing bureaucratic obstacles, the new process hopes to trigger environmental innovation, for several reasons:

- ▶ The ministry will consider all aspects of environmental impact at once, thus eliminating the chance of shifting pollution between locations or processes.
- ▶ The new system aims to increase transparency, inform the public on each company’s emissions and their environmental impact, and allow public comments on the company’s permit drafts.
- ▶ Permit and license applicants will have to prove they are implementing the best available technologies, incentivizing companies to embrace more advanced solutions, and experiment with pilot programs.

Finally, the Israeli government published an [innovative guide to prevent “green-washing”](#) (false claims for environmental action), setting clear standards for environmental marketing that will protect consumers and raise the bar on environmental efforts.

## WHAT FUNDERS CAN DO

- 1) Nurture new initiatives and entrepreneurs** - The most difficult stage in every sustainability initiative, be it a community project or a new start-up, is when an enormous effort is required to lift the initiative off the ground, but it is too early to attract a stable source of funds. Finding and supporting these new initiatives can spur a new wave of ideas, initiatives, companies, and programs that will create unforeseen environmental impact.
- 2) Open your networks: connect local innovators with colleagues abroad** - Some of Israel’s largest environmental organizations were inspired by existing models elsewhere (such as the [Natural Resources Defense Council](#) in the U.S.). Connecting environmental entrepreneurs to outside experts,

potential partners, funders or even clients could give a significant boost to Israel's local environmental arena.

- 3) Leverage ties with the local business community to expand circles of influence** - Despite some progress, the business community in Israel has yet to adopt a sustainability agenda as part of its long-term strategy. Using funders' existing networks in the business community could broaden the network of people and companies involved in environmental change in Israel.
- 4) Partner with other institutions in Israel** - As the fuel choices initiative demonstrates, joining hands with research and development institutions, the government, the business community, and environmental thinkers can lead to environmental breakthroughs. Israel's "smallness" allows for fast and flexible action of the kind ideally suited for testing new technologies, business models, and policies.

## QUESTIONS TO CONSIDER

- 1. How can we help seed new initiatives that cross the boundaries of business, community initiatives, and environmental interventions?**
- 2. How can we accelerate environmental innovation within existing institutions such as planning committees, municipalities, and government ministries?**
- 3. How are funders situated in a unique position to influence the business community, such that it embraces sustainability in their daily operations, policies, and even more so in their business strategies?**

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# Ways to use this Greenbook

Below are ideas for using this book as a text, and as a study tool, to deepen and expand your understanding of environmental funding in Israel.

Chapter questions: At the end of each chapter are discussion questions which can be used to guide group discussions.

A philanthropic resource: The Greenbook is specifically written for funders. As you read this book, consider how you can take this philanthropic resource and convert it into action.

## CHAVRUTA FORMAT

*Chavruta*, (Aramaic: חִבְרֻתָא, lit. “friendship” or “companionship”), is a traditional Jewish approach to Talmudic study in which a pair of students discuss and debate a shared text. *Chavruta*-style learning encourages each student to analyze the text, explain his reasoning to his partner, and hear out his partner’s reasoning. By means of questioning and sharpening each other’s ideas, a *chavruta* often arrives at entirely new insights into the meaning of the text.

- > Set up a time to meet with another funder, possibly as a reoccurring ‘learning’ time. Pick one chapter to learn together. (Take turns reading it, ask each other questions, mark ideas which you want to explore more deeply.) You can use the discussion questions at the end of each chapter to help expand your conversation.
- > With a larger group, break into smaller groups. Here are two ways to do this:
  - ▶ Break into groups of two. Groups learn one chapter together, and then the full group re-convenes for a larger discussion. Use the discussion questions to enhance and guide the discussion.
  - ▶ Break into small groups of 2-4 people. Each group learns a different chapter, using the chapter’s discussion questions to enhance its conversation. The full group re-convenes and each group reports back to the larger group what their group discussed, allowing time for questions.

## GROUP DISCUSSION

- > Book-club style: Invite 10-15 funders to take part in a discussion group. Limiting these meetings to about 15 will allow for a participatory conversation and will encourage everyone to take part. Decide to address 1-2 chapters in the meeting. Ask everyone to read the chosen chapter(s) before the meeting along with the introduction and conclusion. Use the chapter's discussion questions to start the discussion. You can also invite a speaker to address your group (e.g., professional at an environmental organization).
  - ▶ Helpful suggestions: Sit in a circle, in a living room or around a table. One person acts as moderator, to ensure all voices are heard and to facilitate the conversation. If you do not think people will read beforehand, you can do this *chavruta* style (see above).
- > Board meetings: Use this book as a learning tool with your board. Set aside time to discuss one chapter at each meeting. Ask members to review the chapter before meeting, and use the allotted time to discuss the ideas in the chapter and how they connect to your mission and strategy.

## HELPFUL TIPS

- > Suggested guidelines:
  - ▶ Listen actively. Respect others when they are talking.
  - ▶ The goal is not necessarily to agree but to gain a deeper understanding together.
  - ▶ Do not be afraid to respectfully challenge one another by asking questions, but refrain from personal attacks: focus on ideas.
  - ▶ If this is a funders-only conversation, designate it a 'safe space' and clarify that it is "off-the-record."
- > For group discussions, provide index cards so people can jot down questions that arise when someone else is speaking.



# Appendix: Important facts and terms to know about giving in Israel

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Philanthropic giving in Israel from abroad can present new challenges. The issues of civil society are less familiar, as are the local laws and language. There is also the matter of complying with US regulations regarding overseas grantmaking.

But the challenges needn't be daunting. Here are basic tips to keep in mind when giving in Israel:

**FACT:** There are about 36,000 registered *amutot* (not-for-profit organizations or NPOs) in Israel. As in the US, they span the spectrum in their sophistication and management. Of all the registered *amutot* and PBCs (see glossary below) some fulfill their filing requirements and some do not.

## Tip #1: Look for a certification of proper management

Look for organizations with *nihul takin* (proper management) certification, provided by the Rasham Ha'amutot (Registrar of Non-Profit Organizations) to indicate the organization is eligible for public funding. This is the closest equivalent to the US 501(c)(3) status.

For funders, *nihul takin* means the organization has fulfilled its basic filing requirements with the Registrar. It is also the tool used by intermediary organizations to provide tax deductibility for a donor from the United States. By insisting on a valid *nihul takin* you will filter out close to 20,000 Israeli NPOs which are registered, but have not filed basic data with the government.

**FACT:** In Israel, tax returns of NPOs are not publicly available as they are in the US. However, other filings are available at Guidestar Israel, which can include filings with the Registrar of Non-Profit Organizations and information NPOs voluntarily provide. Currently, most information on Guidestar Israel is only available in Hebrew. <http://www.guidestar.org.il/en>

## Tip #2: Vet Israeli NPOs

- a. Request a copy of the organization's filings with the Registrar of Non-Profit Organizations.
- b. Request detailed work plans and budgets. A soundly managed Israeli organization should be as transparent and organized as those in the US.
- c. Include clear statements of expectations, deliverables, and evaluation tools in your grant agreement.

**FACT:** An array of resources in Israel can assist overseas funders in identifying innovative initiatives, exciting grassroots activities, and effective NPOs. Resources include: experienced Israeli philanthropists, foundations, and grantmaking professionals, knowledgeable intermediary organizations, and the JFN Israel office. JFN Israel offers expert, non-biased philanthropic advising to all JFN members regarding grantmaking in Israel.

### Tip #3: Utilize resources available in Israel

Local philanthropists, foundation professionals, grantmaking consultants, intermediary organizations and the JFN Israel office can assist you as you explore new giving opportunities in Israel. The JFN Israel office is available to: connect you with like-minded funders in our network, offer detailed guidance, and recommend grantmaking professionals from our referral database. **For more information, please contact [jfnisrael@jfunders.org](mailto:jfnisrael@jfunders.org).**

Important information about making overseas donations: Always check with your financial and legal advisors before making any overseas donations. A detailed presentation about using an intermediary organization for overseas grantmaking is available on the JFN website at: <http://www.jfunders.org/jfn-programming/give-israel>.

### GLOSSARY OF COMMON TERMS

*Amutah* – The Hebrew word *amutah* (*amutot* in plural) refers to nonprofit organizations, governed by the *Rasham Ha'amutot* (Registrar of Non-Profit Organizations).

*Guidestar Israel* – A joint project of the Ministry of Justice, Yad Hanadiv, and JDC Israel, *Guidestar Israel* is the first publicly accessible database which offers information on all Israeli non-profit organizations.

*Malkar* – A Hebrew acronym for Institute not-intended for profit. The term includes all *amutot*, public benefit companies, government entities, local councils and municipalities, cooperatives, and more. A *malkar* is not to be confused with a non-profit organization.

*Nihul Takin* – A certification of proper management, provided by the *Rasham Ha'amutot* (Registrar of non-profit organizations) to indicate the organization is eligible for public funding, having passed a basic vetting by the Government of Israel. This is the closest equivalent to the US 501(c)(3) status.

Public benefit company (PBC) – A non-profit organization registered as a corporation, rather than an *amutah*, an incorporation structure chosen due to different filing and tax requirements by the entity than *amutot*. For giving purposes, the incorporation structure is irrelevant.

*Rasham Ha'amutot* – *Rasham Ha'amutot* literally translates as the Registrar of Charities, but as of July 2012, it is in fact the Registrar of Non-Profit Organizations, responsible for all *amutot*, public benefit companies, and bequests. The *Rasham Ha'amutot* is a subsidiary of the Ministry of Justice's Corporations Authority.

Third Sector – All non-profit and non-government activities, including NPOs, civil society assemblies, and philanthropy with a goal of enhancing the public good. Third sector follows the first, which is the public sector, the second, which is the business sector, and supersedes the newly coined fourth, which is the social business/capital sector.

46a – Israeli funders can only receive tax benefits when they make donations to non-profit organizations granted 46a status from the Tax Authorities. Only 4,500 organizations have attained this status, equivalent to 501(c)(3) for funders in the US. For overseas funders, this status is irrelevant.

For questions please contact JFN Israel - [jfnisrael@jfunders.org](mailto:jfnisrael@jfunders.org).

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