

Teva Biz – Mainstreaming Biodiversity Considerations in Businesses: Concluding Assessment

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Evaluating Team

Dror Osnat, Ph.D. – Qualitative Research

Didi Kaplan, Ph.D. – Comprehensive evaluation of selected projects, literature survey of the relevant subject matter

Mr. **Dov Goldwin** – Literature survey on global practices

Executive Summary

The Society for the Protection of Nature (SPNI), with the help of the Yad Hanadiv Foundation, has been consistently **leading** and promoting extensive **system-wide activity to preserve biodiversity** in Israel, working with policy makers in the public and business sector. This comprehensive activity is in addition to and beyond routine SPNI activity such as preservation of open spaces in the framework of the planning institutions, ornithology, conservation work with the IDF and more.

At first, most of this activity focused on **mainstreaming biodiversity considerations in planning, development and management processes** among decision-makers in the public sector. This consisted of about ten 2-day workshops in which about 300 jobholders in government offices, local government and government corporations participated. The objective of these workshops was to **increase awareness**, and provide **perceptions and practical tools** to mainstream biodiversity considerations in their ongoing work.

These workshops provided the participants with a basic understanding and the desire to promote and mainstream biodiversity considerations in their organizations; however, **implementing** the knowledge and insights faced a number of obstacles, mainly due to the broad scope and complexity of the topic, as well as the difficulty in promoting internal organizational change. Evidently, there was need of **procedural and professional support** to assimilate the necessary changes.

Consequently, the initiative was modified and is now run as a **combination model** that emphasizes the integration of individual projects in the organizations. A call for proposals for promoting and integrating initiatives within the organizations was distributed to participants in the workshops for senior decision-makers (during 2014). This led to the implementation of a number of projects in the IDF, Mekorot (Israel's national water company) and the Israeli Southern District Planning Committee. At the same time, a number of smaller projects were executed in the Tabor Winery, Hanson Israel, the Israel Electrical Company and Shikun & Binui.

After this initial round, and following evaluation and learning processes¹ it was decided to focus on **one major target population – the corporate sector**. A joint initiative of the SPNI, the Israel Nature and Parks Authority (INPA) and the Ministry for Environmental Protection (MEP) established 'Teva Biz' – **the subject of this assessment**.

Teva-Biz: Businesses take Responsibility for Nature in Israel, offers business (private or governmentally owned) companies management tools, biodiversity-reporting protocols in GRI format, and support for promoting organizational processes to integrate procedures, guidelines and organizational culture to preserve biodiversity². The objective is to encourage voluntary corporate activity, to mitigate the environmental effect of their core activities. Our ambition is to ultimately mainstream the agreed upon products, both horizontally, in other similar companies and vertically, i.e. regulatory integration.

Teva-Biz (the initiative) is based on the knowledge and insights accumulated in previous years. It included publishing a call for proposals, selecting winners, individual characterization of each organization, contacting an advisory team, conducting workshops for leaders in the different organizations, presenting completed projects followed by monitoring and assimilation. This framework included three rounds of activity, each lasting about two years, in which 15 companies participated, including national infrastructure companies, agriculture and tourism companies and other bodies.

The **broad range of fields, subjects and companies** that were part of the initiative in recent years is significant. It is involved with national infrastructure companies, agriculture, tourism and mining companies. The subjects covered (and still covered) by the initiative include dealing with a number of **core issues** related to biodiversity: invasive species, light pollution, endangered plants, sustainable agriculture, ecotourism, infrastructure and ecological fragmentation.

¹ Osnat, D. (2014) Biodiversity workshops for senior decision-makers: Concluding assessment. Submitted to the SPNI.

² <https://tevabiz.org.il/lets-talk-business/>

In view of the fact that the major philanthropic funding source of the initiative is expected to end this year, it is necessary to evaluate what has been done until now and prepare for the future.

Therefore, it was decided to conduct an evaluation to assess the perceptions and positions of all the stakeholders involved in the project regarding its success, to identify and map strengths and weaknesses of the initiative and to emphasize suggested directions for future activity.

The assessment report is based on **three studies**, presented in the full Hebrew report as separate secondary reports.

The first report presents the **qualitative assessment**, which included 36 semi-structured in-depth interviews, with individuals from companies participating in the initiative as well as from different environmental organizations. **Dr. Dror Osnat** performed and wrote this part, as well as the entire report.

The second report is a **comprehensive professional ecological assessment** of some of the companies that participated in the project. It includes in-depth consideration of professional aspects, the products and significances of the project from an ecological perspective in Mekorot, MILOPRI and Petroleum & Energy Infrastructures Ltd. This study was conducted and written up by Dr. Didi Kaplan³.

The third report is a global literature review and case study compilation, which focuses on the topic of encouraging cooperation between environmental organizations and private corporations to preserve biodiversity, with all its implied significance. This literature review was conducted and written by Dr. Didi Kaplan and Mr. Dov Goldwyn.

This assessment shows that Teva-Biz is a **very successful enterprise, despite a challenging beginning and structural and external problems**. These include the poor state of global nature and biodiversity, the relative weakness of Israel in this field, and the lack of significant system-wide involvement in promoting biodiversity preservation (including lacking regulation and the

³ The Petroleum & Energy Infrastructures Ltd assessment is not final. The final version will be added at a later date.

absence of government incentives to promote the issue), low public environmental awareness in general and of biodiversity specifically. Nevertheless, the initiative has produced **many and diverse successful results**. The intrinsic conflict in the initiative is the promotion of operational guidelines to minimize negative effects on nature – which is a public good – by private corporations active in the business/economic field.

The relatively **limited amount of resources that were allocated to the project**, highlight its many achievements even more. The results of the initiative still have **significant potential that is waiting to be realized**. Without significant action by the SPNI, INPA and the MEP, as well as by philanthropists, this potential will not be realized.

The interviews make it clear that the importance and success of Teva-Biz is a result of the successful **identification of the need, from the initial involvement in creating an essentially voluntary cooperation with private companies** to benefit biodiversity. This, as well as **creating points of agreement between the "green organizations"** – involving the government sector in formulating recommendations and points of agreement in projects, putting the subject on the agenda, launching **new modes of action and developing significant and relevant knowledge**. There was agreement with the basic assumptions of initiative and its goals. The day-to-day operation, and the personal and professional admiration for the professionalism, commitment, availability and attention to the needs of the private companies on the part of the steering team, also received outstanding positive evaluations.

On the general level, **two main weaknesses** were noted regarding the project and its potential for effecting change on a broad scale. Firstly, the lack of united integrative system-wide **organizational leadership** of the project, neither by the SPNI (both inwards, within the organization, and outwards, versus other environmental organizations), nor on the part of the other associated environmental bodies (INPA, MEP). This issue is also discussed in the section on barriers to implementation. Another weakness relates to the need for **increasing the impact** of the Teva-Biz brand (while allocating resources for that), both inwards (the partners in the project) and outwards towards companies and organizations, as well as the general public.

The interviewees noted **a number of motivations** to encourage private companies to join the project, including social values, long-term business foresight that aspires to anticipate future regulation on environmental issues, branding and competitive advantage, but above all, to focus on visible economic business benefits, whether directly or indirectly. All this together with a personal empathy for the subject on part of most of the agents leading the projects in the companies.

The interviewees also noted a long list of effects and outcomes on different levels in the framework of implementing Teva-Biz. There is a broad consensus that the project changed awareness and perceptions in the companies regarding the importance of preserving biodiversity in general, as well as regarding the specific effects of topics such as light pollution, invasive species, changes in agricultural practices and the effect of infrastructure, including electrical and transport infrastructure, on biodiversity. The in depth acquaintance with environmental aspects contributed to finding a tailored solution suited to the concrete needs of each organization.

The means of **integrating the specific aspects of the initiative** are varied, and lie along a scale running from total integration in the organization, including implementation in the field (e.g. the Tabor Winery), and the two initial stages of implementation and integration of the program: updating planning and acquisition practices and beginning actual implementation of the various activities. Many of the interviewees considered the adoption of the professional guidelines and standards to be implementation, believing that the organizational bureaucracy would already see to the actual implementation in the field. Apparently, the handling of light pollution issues was perceived as more successful and significant than coping with invasive species. Moreover, implementation in the planning stage for new projects/installations is obviously considered simpler and easier than implementing extensive changes in existing installations. The comprehensive assessment conducted in three of the participating companies, Mekorot, MILOPRI and Petroleum & Energy Infrastructures Ltd. showed that the selected methods and the implemented practices were applied and integrated appropriately and professionally, as was the necessity of post-implementation long-term monitoring and

control. Furthermore, the report already shows significant environmental effects that are already evident.

Interviewees also noted **cross-organization horizontal effects**, albeit only initial, of the initiative. Penetration and horizontal transmission of perceptions, summaries and work protocols in planning committees as well as expansion of regional/local agreements to national levels. For example, the assimilation of the invasive species prevention standard requiring renewal of quarrying permits, or adoption of lighting standards formulated in the framework of work with Netivei Israel (Israel's National Transport Infrastructure Company) by other transport infrastructure companies. In addition, the initiative operates a designated website, open to all, which concentrates all the products accumulated as part of the project.

Finally, we should note the improvement and strengthening of ties in the work of some of the organizations with various environmental organizations, together with specific branding benefits.

The report presents a number of obstacles and challenges the project had to deal with. Firstly, the **multidimensional professional complexity** necessary for preserving biodiversity. In this case, there is need for comprehensive multidisciplinary knowledge, in a variety of relevant topics, as well as a clear understanding of the ability to adapt basic insights and comprehensive professional knowledge to concrete and local contexts, while understanding the limitations and business and operational needs of the companies. This is where the difference between the involvement with light pollution issues, which are considered relatively simple and clear-cut, and invasive species, where both the definition of the problem, as well as the complexity of implementing and ongoing handling, are far more complex, arises, sometimes with no clearly demonstrable economic benefits for the company. The report also focused on the **sectorial features** characteristic of infrastructure companies versus those of agricultural companies, and their significance for implementation. Moreover, **the need for increased commitment**, coordination and cooperation between the **environmental organizations** themselves – each organization **within itself**, as well as the interactions between the organizations, also arose. In other words, there is a lack of intra-organization integration in formulating the insights and

concepts of the initiative and in expressing a uniform professional voice by all the environmental organizations as a preliminary stage in formulating a comprehensive perception and professional approach.

One of the more serious topics broached is **the issue of funding**, allocating resources and establishing a framework for long-term stable activity, which is an expression of the commitment of the various organizations to preserve biodiversity. There is a clear need for establishing focused and comprehensive action to raise funds for the purpose of implementing and expanding the project. Fundraising is a major barrier, and a significant expression of the difficult structural circumstances in which conservation in Israel operates. There is a **deep conceptual gap, which hinders fundraising for the initiative**. On one hand, government and philanthropic agencies find it difficult to understand the need for funding activity in the private ("rich") sector; on the other hand in the opinion of the corporations, investments in biodiversity conservation are largely investments in "public goods" that the government should be funding (which is even more true in the case of government companies). As a result, taking responsibility, just like the funding of the initiative, ends up as a no-win situation.

The report also noted the **factors promoting the success** of the initiative, **primarily the human element in the initiative team**, which received extensive approval. The team members were enthusiastic and committed, knowledgeable in a broad spectrum of professional, organizational and management fields, infinitely persevering and caring, learning and drawing conclusions along the way, intimately acquainted with all the factors in the field, and possessing an unusual ability to connect and persuade.

Furthermore, the following factors contributed to the success of the project:

- adopting **methods** of cooperation and dialogue that stemmed from a genuine desire to understand the constraints of the companies, and not from **conflictual behavior**;
- **financial participation** in the initial project cost as an expression of commitment;
- identification of **effective intra-organizational agents**, i.e. on management levels that allow effective activity in the field, together with recruitment of **management elements senior enough** to lead a process on the level of the entire organization;

- developing a system of **win-win benefits** and presenting visible advantages;
- presenting "low-hanging fruits", i.e. "small wins" in the field proving short-term feasibility and progressing to long-term expansion;
- integrating **leading professionals and consultants** at each of the action levels;
- **appointing a committed professional project manager (from late 2017)** to monitor the project from close-up vis a vis each of the participating companies, while providing a variety of professional and organizational responses, support and help on a regular basis;
- **providing a broad range of tools**, both content-related and related to leading intra-organizational change;
- developing a **support net** of partners in the project via **workshops and conferences**, which serves as a platform for communication, publicizing successes and transferring knowledge.

The **comprehensive assessment** in the three companies that participated in the project (in this report we relate to only two of them, Mekorot and MILOPRI, the third will be added at a later date) **illustrates the significant potential of the initiative, and the need for a long-term, consistent mainstreaming procedure.** This was the case for Mekorot that participated in two calls for proposals, one focusing on light pollution and the other on invasive species. The assessment shows that the guidelines were integrated in the instructions of the company's chief engineer in development plans; however, their integration in the development department is either non-existent or incomplete. About one third of the installations in the Central District are already darkened, and the remainder should be darkened within two years. Nevertheless, it is necessary to tighten monitoring in the future, in particular after assimilation in the routine maintenance at all levels of the company. It is also necessary to establish a long-term monitoring and oversight framework for invasive species, which together with promoting regulation or legislation to organize the management and prevention of invasive species in the infrastructure corporate sector.

The implementation assessment in **MILOPRI** focused on the environmental commitment of the company management, in particular the internalization of the deep conceptual change regarding the importance of assimilating activity to preserve biodiversity, as well as the

economic and agricultural benefits resulting from it. Management's involvement is expressed not only in company documents, but also in the instructions of managers and agricultural extension workers to the orchard managers. Here too, the challenge of long-term assimilation in the field was brought up, as well as the importance of post-implementation monitoring and oversight.

The **literature review** in the report evaluates the activity of other environmental organizations (**not** Teva-Biz) with private corporations with the aim of mitigating their adverse effect on **global** biodiversity. The review presents seven cases that illustrate models of this type of joint action. The most common model found in the review, does indeed show many publications of private businesses regarding their commitment to preserving the environment in general, and biodiversity in particular, sometimes in partnership with environmental organizations and sometimes independently. However these publications are mainly **declarations, intentions and descriptions of action principles**, and there are **almost no reports of concrete actions**, and even less of actual results. The preliminary basic commitment of company owners or managers is a significant and important factor that increases the chances of concrete action ensuing from cooperation between the companies and environmental organizations.

The conclusions from this literature review strengthen the **essential basic conditions** needed for the success of joint action of environmental organizations and private corporations, including commitment and accountability for the environment on the part of the companies, effective government regulation, agreed and binding goal determination, **measuring and reporting** as well as publicity and education. Although the review also notes successes, the general conclusion is that the effect of these activities (abroad, non-Tevabiz projects) is still very limited.

Recommendations for the Future

In view of the above, we suggest the following:

1. From this summary, it is obvious that the **initiative was very successful** in Israel, and based on the literature review, **on a global scale as well**. This is a clear case of **creating sustainable change** in businesses, despite significant structural barriers and the need to work in a framework of limited resources. Thus, **the first recommendation is to carry on with this initiative, and not stop it**. Continuity has two aspects: maintaining long-term monitoring and oversight of the companies that participated in the project and **continuing to recruit new companies** for additional rounds, such as system-wide investment in assimilating knowledge and products "vertically" to the regulating and planning elements, and "horizontally", i.e. to other companies in the business sector.
2. Secondly, it is necessary to **intensify the organizational commitment of environmental bodies to the initiative**: studies have shown that the extensive professional knowledge and the concrete expertise are not managed in an orderly and organization-wide manner in the different environmental agencies. It could be said that the partnership is more vis a vis the staff in organizations (POC), and less of an organization-wide partnership. Intensifying the organizational commitment of environmental agencies should include formulation of integration processes and an **intra-organizational work plan**, which determines objectives and monitoring mechanisms. This would improve knowledge transfer, perceptions, work practices and other elements necessary to increase the initiative's success. **Project management on the level of the partner bodies (SPNI, INPA, MEP) should be improved**, and an **operational steering committee** should meet regularly and focus on the aspects of assimilating and promoting the biodiversity content produced by the initiative.
3. With the understanding that creating comprehensive change in such a professionally and organizationally complex world takes time, **expanding and formalizing the budget and the organizational resources** for the Teva-Biz initiative should be considered. We believe that a regular, stable and long-term budgetary commitment is needed from all the environmental agencies (the MEP, SPNI and the INPA) as well as an additional

coordination position in the project's staff. As mentioned, currently the project coordinator and the Biodiversity Policy Manager (partial funding), are funded by philanthropic foundations and not as a permanent position. Thus, there is **urgent need** of regulations and additional funding that would allow the following, in addition to the ongoing management of the initiative vis a vis the companies participating in the "call for proposals":

- a. Long-term periodic monitoring of the implementation in companies that participated in the initiative.
 - b. Organization of regular conferences for all the partners and stakeholders.
 - c. Monitoring and oversight of the assimilation of knowledge and understandings accumulated in the different environmental agencies.
 - d. Organization of the knowledge, making it accessible and disseminating it to additional companies and various regulatory elements.
 - e. Ongoing updating and promotion of the Teva-Biz website, making its content accessible and disseminating it.
4. **Positioning Teva-Biz at the head of SPNI activity**, improving the interface between the activity and products of the initiative and the SPNI activities in general, and the field of biodiversity in particular, and clearer and more significant organizational support for the initiative (staff, funding).
5. **Budget:** Throughout its existence, the initiative has not had regular designated funding, but has subsisted by recruiting resources and agreements anew every two years. We consider it of utmost importance to have **a regular designated budget** for this activity from all the partners in the enterprise: SPNI, MEP and the INPA. Furthermore, in this context, it is necessary to identify strategic modes of action in foundations and to recruit them in the framework of this initiative. (Thus, for example Yad Hanadiv in the field of streams, catchments and soil conservation, other philanthropic organizations in climate issues, etc.) The proposals brought up in the interviews should be evaluated as a source of additional funding.

6. **Working with the companies:** One of the aspects that requires improvement is the involvement of senior management in the participating companies from the early stages, which is essential to creating commitment. Moreover, a **differential budget** should be considered for the implementation stage, according to the capabilities of the company.
7. **Harnessing and recruiting more government agencies as funding partners:** As of now, the efforts invested in this subject were not successful; however, we consider it of utmost importance to invest additional focused efforts to recruit significant actors from other relevant government ministries (e.g. agriculture, energy, economy and industry). Additional and different thought directions might be required to increase effectiveness in this field.
8. **Publicizing the successes of the initiative:** We consider it essential to leverage and publicize the numerous successes of the initiative, both in general and for specific company projects. We suggest promoting a wide-ranging, meaningful long-term publicity campaign to publicize the numerous successes of the initiative. This would increase the benefits for the participating companies, motivate other companies to participate, scale up the influence and dissemination of existing knowledge, to influence and harness decision-makers, politicians, business and institutional elements.
9. **Intensifying public awareness:** In view of the lack of success in attracting partners from government (except for the MEP and INPA), the Government Companies Authority or other agencies, it is necessary – not directly related to this initiative – to initiate a comprehensive process to increase awareness of the importance of preserving biodiversity and ecosystems in the general public, institutional agents, decision-makers and others. Success requires focused joint action with extensive resources from all the environmental agencies in Israel.

Introduction and Background

The Society for the Protection of Nature (SPNI), with the help of the Yad Hanadiv Foundation, has been consistently and continuously **leading** and promoting extensive **system-wide activity** to **preserve biodiversity** in Israel.

Israel is a globally important biodiversity center and is even included in the map of the most important global sites for preserving biodiversity. Nevertheless, and despite extensive positive activity by many organizations, the state of nature in Israel is declining. In 2010, when Israel officially joined the OECD, it adopted the Convention on Biological Diversity (CBD)'s Strategic Plan for Biodiversity for 2011-2020. The plan includes 20 operative, measurable, time-bound biodiversity targets. Nevertheless, as early as 2014 the SPNI became aware of the **significant gaps between the country's commitment to the global standards, and its actions in the field of biodiversity preservation and government preparation for its sustainable management**⁴. Indeed, the national strategic plan for biodiversity (budgeted, measurable and binding) was not prepared or adopted by the government to this day.

As a result, and in view of the country's delay in implementing its responsibility, the SPNI promoted, as noted above, activity to preserve biodiversity in Israel (along with extensive activity by the Israel Nature and Parks Authority and various, albeit sporadic, activities initiated by the Ministry for Environmental Protection).

At first, most of this activity focused on **mainstreaming biodiversity considerations in planning, development and management processes** among decision-makers in the public sector.

Between 2010 and 2014, about ten 2-day workshops were held, in which about 300 jobholders in government offices, local government and government corporations participated. The objective of these workshops was to **increase awareness**, and provide **perceptions and practical tools** to mainstream biodiversity considerations in participant's ongoing work.

⁴ See: Rothschild, A (2014). Israel's preparations for nature conservation: complying with the OECD recommendations and the global Strategic Plan for Biodiversity for 2011-2020, gaps and recommendations. Position paper submitted to the Prime Minister, SPNI.

These workshops provided the participants with a basic understanding and the desire to promote and mainstream biodiversity considerations in their organizations; however, **implementing** the knowledge and insights faced a number of obstacles, mainly due to the broad scope and complexity of the topic, as well as the difficulty in promoting internal organizational change. Evidently, there was need of **procedural and professional support** to assimilate the necessary changes.

Consequently, the initiative was modified and is now run as a **combination model** that **emphasizes** the **integration** of individual projects in the organizations. A call for proposals for promoting and integrating initiatives within the organizations was distributed to participants in the workshops for senior decision-makers (during 2014). This led to the implementation of a number of projects in the IDF, Mekorot (Israel's national water company) and the Israeli Southern District Planning Committee. At the same time, a number of smaller projects were executed in the Tabor Winery, Hanson Israel, the Israel Electrical Company and Shikun & Binui.

After this initial round, and following evaluation and learning processes⁵ it was decided to focus on **one major target population – the corporate sector**. A joint initiative of the SPNI, the Israel Nature and Parks Authority (INPA) and the Ministry for Environmental Protection (MEP) established 'Teva Biz' – **the subject of this assessment**.

Teva-Biz: Businesses take Responsibility for Nature in Israel, offers business (private or government owned) companies management tools, biodiversity-reporting protocols in GRI format, and support for promoting organizational processes to integrate procedures, guidelines and organizational culture to preserve biodiversity⁶.

Teva-Biz (the initiative) is based on the knowledge and insights accumulated in previous years. It included publishing a call for proposals, selecting winners, individual characterization of each

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⁶ <https://tevabiz.org.il/lets-talk-business/>

organization, contacting an advisory team, conducting workshops for leaders in the different organizations and presenting completed projects.

This framework included **three rounds of activity**:

In the first round, between 2015 and 2017, projects were conducted with Netivei Israel (Israel's National Transport Infrastructure Company), the Israel Electrical Company (IEC), Petroleum & Energy Infrastructures Ltd. (PEI) and the Mediterranean Coastal Cliffs Preservation Government Company Ltd. (MCCP). In this round, a manual for reporting about biodiversity was prepared in the framework of corporate responsibility.

In the second round (the call for proposals was published in 2017), new projects were selected with Netivei Israel and the IEC, Timna Park, the Tara Dairy, MILOPRI and Mekorot. This round also included round tables to promote environmentally friendly lighting, and a designated website was established⁷. Ms. Lihi Barkan was chosen to manage the project full-time – the only permanent full position allocated to the initiative, which is funded by an external foundation.

In the third round (current and not yet completed), an additional call for proposals was published, whose winners were the Barkan Winery, Ein Netafim (the Eilat Water And Sewage Plant Ltd.), the Israel Cotton Board Ltd. and the Golan Economic Corporation. There are also plans to promote additional research with the IEC (to be funded by the INPA and the Israeli Open Spaces Conservation Fund) and to promote an environmental code for environmental lighting.⁸

We should emphasize at this stage the **broad scope of fields, subjects and companies** on which the initiative focuses in recent years. It is involved with national infrastructure companies, agriculture, tourism and mining companies. The subjects covered (and still covered) by the initiative include dealing with a number of **core issues** related to biodiversity: invasive species,

⁷ www.tevabiz.org.il

⁸ The various projects in the Teva-Biz framework according to companies and expected results, appears in Appendix A.

light pollution, endangered plants, sustainable agriculture, ecotourism, infrastructure and ecological fragmentation. The products and results of the activity in the different companies are detailed in **Appendix A**.

The initiative has had **significant successful results** in these fields, despite challenging initial conditions, which include the lack of government regulation, and as we will see later extremely poor public environmental awareness. All this has been attained despite relatively moderate funding, which is **not included in the regular budget** of any of the partner organizations (SPNI, INPA and the MEP), but is provided locally and temporarily over the years. **The annual budget of the initiative is 640,000 NIS**, of which 395,000 NIS are provided by the SPNI (special foundations or basic funding), about 175,000 NIS by the MEP and about 70,000 NIS by the INPA. The initiative is careful not to take direct funding from companies in the business sector, and the inputs and resources of the partner companies are used for implementation and integration, and are not transferred to the SPNI or used for funding the initiative staff.

During the current year the major philanthropic funding source of the initiative, which supported it from the start, is expected to discontinue its support for the initiative in its current format. The activity in the framework of the partnership with the MES and INPA will continue and expects to develop further.

We understand that this is a significant milestone in time and in the development of the initiative, and that there is need to summarize and assess what has been done up to now and look into and focus on the future.

The Goals of the Assessment and the Questions Asked

At this point, it became obvious that an assessment was needed to evaluate activity up to this stage, which would help the processes of learning, thought and drawing conclusions. This came in the wake of the realization that there had been a significant organizational change in the broader initiative, as a result of several factors:

- the withdrawal of the foundation from the partnership;
- the considerable accumulation of actions, partnerships, results and knowledge vis a vis a wide variety of companies and organizations;
- activities already completed and those that were still in advanced stages of integration
- in view of the vision for expanding the business sector and its regulation.

This was true on two levels: on the micro level, i.e. optimizing the integration and activity vis a vis the organizations, and on the macro level, i.e. basing the initiative on a strong, long-term foundation and advancing the system-wide integration of its products for the benefit of preserving biodiversity.

The objective of the assessment, therefore, was to understand the perceptions and attitudes of all the agents involved in the initiative regarding its success, to identify and map the strengths and weaknesses of the initiative and to indicate recommended directions for the future.

Specifically the assessment wishes to answer the following questions:

- a. The general attitudes to the initiative:** How do the different actors view the initiative in general – how necessary and important is it, from what aspects it is considered more or less successful? Furthermore, how can the success of the initiative be defined (measured)? What are the major effects of the initiative on a general level, if at all, how is its super-objective perceived, to what extent is it perceived as implementable? Which are the factors to focus the initiative activities on?
- b. Attitudes towards ongoing performance:** How is the conduct towards the SPNI perceived at different stages of the initiative – from the publication of the call for proposals until the end of the project? What are the strengths and weaknesses in the

ongoing relationship with the SPNI? Which factors advanced effective action and which hindered it? What should be improved in the performance of the initiative and what should be preserved (call for proposals, connections with consultants, ongoing support, interactions between organizations (relations, conflict management) during the initiative and after its completion and anything else in this context)?

- c. **Effects, outputs and results:** Can changes that occurred in the activity of the **organization** because of the initiative – conceptual, organizational, administrative, resource-related and the like – be sensed? What are they? How are the outputs of the specific project integrated in the organization perceived – were the objectives attained, what were the perspectives regarding cost-benefit of the project for the organization, what profits (direct and indirect) did the organization get as a result? How are the expenses of the organizations in the project perceived relative to the benefits? Are there organizational effects beyond the specific project? What are they? What can be/should be done to expand the within-organization effects? Who were the agents involved in the initiative? To what extent is the project "sensed" or known in the organization? How do environmental organizations and third parties appreciate the outputs and results of the project – quality of integration, other environmental effects and the like.
- d. **Expert evaluation:** What can be said, objectively, from a professional-ecological perspective about the quality of the processes, products and effects of the initiative on different levels? From the perspective of the quality of the expert definitions, the integration, installation, and if possible – on the level of results in the field?
- e. **Learning from the world:** What can we learn from relevant research literature and from the accumulated experience in the world in relation to promoting commitment of business organizations to biodiversity preservation? Can we point to factors that facilitate or hinder, to the position of government, the market and the public at large? Are their lessons or insights we can apply to the Israeli case?
- f. **Future directions:** How do the different participants suggest the initiative continue?
 - Suggestions for focusing on target populations, subjects and topics;

- expanding areas of activities;
- recruiting and work methods;
- publicity and marketing;
- inter-organizational/inter-institutional cooperation;
- locating possible partners and sources of funding;
- effective marketing strategies for the business sector (what and how to convince corporations to invest in the field) and with regulators (financial harnessing, promotion and horizontal integration of tools, experience and knowledge developed in the framework of the initiative), and any other topic in this framework.

In order to answer these questions the assessment report included **three studies**, presented in the full Hebrew report as separate secondary reports.

The first report presents the **qualitative assessment**, which included 36 semi-structured in-depth interviews, with individuals from companies participating in the initiative as well as from different environmental organizations. **Dr. Dror Osnat** performed and wrote this part, as well as the entire report.

The second report is a **comprehensive professional ecological assessment** of some of the companies that participated in the project. It includes in-depth consideration of professional aspects, the products and significances of the project from an ecological perspective in Mekorot, MILOPRI and PEI. This study was conducted and written up by Dr. Didi Kaplan⁹.

The third report is a global literature review and case study compilation, which focuses on the topic of encouraging cooperation between environmental organizations and private corporations to preserve biodiversity, with all its implied significance. This literature review was conducted and written by Dr. Didi Kaplan and Mr. Dov Goldwyn.

⁹ The PEI assessment is not final. The final version will be added at a later date.

Method

The qualitative assessment is based on 36 semi-structured in-depth interviews, according to the mapping determined for the study with the initiative team. The list of interviewees and their positions is included in **Appendix B**.

The interviews were conducted between September and December 2020, by video conferencing. All the interviewees were ensured confidentiality, and efforts were made not to use statements that identified speakers by name. With one exception, which was not problematic, the organizations were also kept confidential in the statements.

The interviewees came from three types of organizations (and were accordingly identified in the findings):

- a. **Environmental organizations** – SPNI, INPA, MEP, Yad Hanadiv, etc.
- b. **National infrastructure companies** - IEC, PEI, the National Road Company, Mekorot, Rafael Advanced Defense Systems Ltd., the MCCP. The Hanson Quarry, although privately owned, was also included here.
- c. **Agricultural and tourism companies** – Timna, MILOPRI, Tara Dairy, Tabor Winery.

The position/rank of the interviewees was noted as well, according to the following classification:

- a. **Senior management** - CEO or deputy CEO
- b. **Professional management** – operational managers, planning, engineering, etc.
- c. **Environmental management** – environmentalists / ecologists

We were careful not to combine two different quotes from the same speaker in the sequence of the various subjects. Occasionally we made slight corrections so that written and spoken text agreed, to prevent repetitions or to correct slight grammatical errors. In no case did we change the spirit or intent of the words. All the emphases in the quotes are the author's.

Appendix A – Companies and Projects Participating in Teva-biz¹⁰

Company	Subject, activity and years ¹¹	Products
Mekorot	Invasive species protocol (2014-2017)	<ul style="list-style-type: none"> • Guidelines and pocket guide for dealing with invasive species; approved by Mekorot, the Israel Water Authority, the INPA, MEP and SPNI. • In new projects, the guidelines are included in the instructions for the contractor.
	Light pollution reduction in the company installations (2017-2019)	<ul style="list-style-type: none"> • Formulation and approval of internal guidelines for planning environmentally friendly lighting – "chief engineer instructions" for lighting systems. • Pilot project to upgrade lighting at the Eshkol facility that led to 86% savings in electricity, and darkened 3 hectares of natural areas. • 63 installations (out of 164) located in ecologically sensitive areas were darkened.
Israel Electrical Company (IEC)	Protocol for dealing with invasive species and light pollution in the company installations (2014-2017)	<ul style="list-style-type: none"> • Document with recommendations including expert guidelines for ecologists involved in planning and establishment, and guidelines for conducting invasive plant surveys was completed. The document is a work plan for an interdisciplinary team working on the topic in the framework of sustainability in the IEC. • The national survey on invasive species and light pollution in electrical company substations was completed, including specific mapping of invasive species and light pollution potential in installations located in open areas, and determining priorities in the framework of the proposed work plan.

¹⁰ According to the project report.

¹¹ Activity years refer to the years in which the core project was conducted, and not to the subsequent monitoring and integration following the completion of the core stage.

Company	Subject, activity and years ¹¹	Products
	Reducing bird collisions with power lines (2015-present)	<ul style="list-style-type: none"> • The first field study in Israel was conducted to assess the scope of the problem of bird collisions with power lines. Rate of collisions was found to be 200 birds/km/year in the area studied. • A GIS model was developed to identify the areas most sensitive to collisions with birds. • A review of literature was conducted, following which three preferred methods for marking power lines to reduce the scope of the problem were identified. • Based on previous products a proposal was submitted to the Israeli Open Spaces Conservation Fund (OSCF), which was approved. A broad applied research project funded by the IEE, the OSCF, the INPA and the SPNI to evaluate the effectiveness of the marking and installation methods from an ecological, operational and economic aspect. • A successful feasibility study was conducted for the installation of the marking methods using a drone – a new installation method for Israel. • The recommendations are already being implemented in the framework of planning institution discussions regarding the planning of new power lines.
National Road Company	Protocol for dealing with invasive species (2015-2018)	<ul style="list-style-type: none"> • Guidelines and a pocket guide for dealing with invasive species was prepare and approved by the National Road Company, the INPA, MEP and SPNI. The document was integrated in the internal National Road Company guidelines (task manual for ecologists, manual for planners, etc).

Company	Subject, activity and years ¹¹	Products
		<ul style="list-style-type: none"> • The regulation for treating captive invasive species was approved, but its implementation has been delayed.
	<p>Light pollution reduction along NRC roads (2017-2019)</p>	<ul style="list-style-type: none"> • The guidelines and technical specifications for environmental friendly lighting were approved by the NRC, the Ministry of transport, the INPA, MEP and the SPNI. • The guidelines were integrated in the internal National Road Company guidelines (manual for ecologists, manual for environmental planners, etc). • A GIS model was developed to identify the areas most sensitive to light pollution. • The NRC published a tender for replacing all the existing lighting (about 100,000 bulbs) that includes reference to environmentally friendly lighting for ecologically sensitive areas. • A pilot project to upgrade lighting at the Samar Junction was implemented. This led to a 47% reduction in electricity consumption and darkened 3.6 hectares of natural areas. All this while maintaining the quality of lighting necessary for safety. • All the NRC lighting planners received instruction on how to comply with the minimal lighting required, which would lead to a reduction of light pollution.
<p>Tabor Winery</p>	<p>Biodiversity-supporting vineyards (2012-2015)</p>	<ul style="list-style-type: none"> • A protocol for management of ecological cultivation of the Tabor Winery vineyards was prepared and implemented in over 75% of the vineyard area (over 140 hectares). • A vineyard atlas was developed that constitutes a spatial analysis and ecological guidelines for implementation in each

Company	Subject, activity and years ¹¹	Products
		<p>vineyard, with the proposed solutions adapted to the location of the vineyard and the ecological sensitivity of the site.</p> <ul style="list-style-type: none"> • Actions included discontinuing herbicide spraying between the vineyard rows, preserving natural field margins, restoration of rocky plots and streams in the vineyards and planting native tree species at the edges of the vineyard. • The vineyard initiated a broad-scope ecological branding campaign as a result of the project.
MILOPRI	Biodiversity compliance protocol (2017-2019)	<ul style="list-style-type: none"> • Protocol for biodiversity management in avocado orchards referring to the reintroduction of endangered and indigenous plants, integrating a mixture of cover plants, reducing herbicide use and dealing with invasive species. • Three refuge gardens were established for endangered species (2 of heavy soils and 1 of light soils). • A winter pond was rehabilitated (and now functions as one of the refuge gardens). • Hundreds of seedlings, belonging to six endangered species (3 of light soils and 3 of heavy soils), were planted. The plantings were conducted in four separate orchards. • The MILOPRI lands were classified into three levels of conservation according to the potential of connectivity of the plots to natural areas. • Manuals were written for each of the growers. Each manual referred to all the actions needed for each specific plot according to the final report that was

Company	Subject, activity and years ¹¹	Products
		<p>approved by MILOPRI, the INPA, MEP, the Ministry of Agriculture and the SPNI.</p> <ul style="list-style-type: none"> • A marketing brochure in English was prepared for export branding.
Hanson Israel	Protocol for dealing with invasive species (2013-2016)	<ul style="list-style-type: none"> • An ecological code for dealing with invasive species was formulated and integrated in the company quarries. • This eco-code was integrated as compulsory guidelines in the business license by the MEP for all the quarries in Israel. • Three nature sites near the quarry were rehabilitated, while strengthening the connection between the quarry and the adjacent community and the affinity of the workers to the company and their company pride.
Timna Park Eilat Regional Economic Development Company	Ecological management plan for Timna Park (2017-2019)	<ul style="list-style-type: none"> • An ecological value map of the park was prepared that integrates the ranges and main activity areas of the fauna and flora of the park and classifies the park according to three sensitivity levels. • A plan for environmental management of the park was developed that includes: detailed guidelines for managing events and productions, environmentally friendly lighting, prevention of hydrological fragmentation, sanitation, reduction of vehicular movement effects, ecotourism, etc. • The lighting on the trees at the lake was replaced with environmentally friendly lighting and the entrance lighting is now in the process of being changed. • The approach paths at the site were structured to protect ecologically sensitive areas.

Company	Subject, activity and years ¹¹	Products
		<ul style="list-style-type: none"> • The park appointed a warden who roams the park sites daily to ensure visitors understand the park rules and the importance of park nature conservation. • Park trashcans were replaced to comply with sanitation requirements. • Sediments are removed by the park staff, with a focus on minimizing damage to natural surface runoff and to the soil crust and vegetation near the paved/dirt roads.
Tara Dairy	Sanitation and prevention of light pollution in cowsheds (2017-2018)	<ul style="list-style-type: none"> • Fencing specifications to prevent access of eruptive species to food sources in cowshed. • Guidelines for intelligent planning of cowshed lighting were formulated, which include identifying needs and adapting lighting while preventing light leakage into open areas around the cowshed. • The project was discontinued after it became clear that the company did not intend to invest resources in the pilot project or in the broad implementation of the recommendations.
Petroleum & Energy Infrastructures Ltd.	Light pollution prevention (2015-2017)	<ul style="list-style-type: none"> • Pilot project to improve lighting at the Elro'i facility, which led to a savings of 80% in electricity consumption and darkening of 13.5 hectares of natural areas. • Subsequent to the pilot success, it was decided to upgrade the fence lighting at all the company facilities. Up to now, seven facilities have been upgraded and the remaining ones are in the process of being upgraded.
	Ecological management plan	<ul style="list-style-type: none"> • Preservation of assemblages of the endangered endemic plant <i>Allium kollmannianum</i> by means of rope fencing,

Company	Subject, activity and years ¹¹	Products
	for the Eshel facility (2015-2017)	<p>signage and preventing herbicide spraying, based on a designated company procedure.</p> <ul style="list-style-type: none"> • A person responsible for plant conservation at the facility has been appointed, and paths opened to allow visits to the plants. • Selective elimination of invasive species in order not to harm the endemic vegetation.
Mediterranean Coastal Cliffs Preservation Government Company	Ecological management plan and guidelines for planning cliff protection (2015-2017)	<ul style="list-style-type: none"> • Ecological and environmental guidelines were approved for implementation in all the stages of the project. Guidelines include reference to the location of workstations in the sea and on land and activity in them including timing of activity, noise and light pollution, water turbidity and preventing penetration of invasive species. • An ecological management matrix was developed that includes correspondence between the suggested solutions for protecting the cliff and the sensitivity and value of the site. • A conservation toolbox was developed that includes specific guidelines for each protective solution proposed for the cliff, including technical specifications for ecological guidelines.
Open Seas	Fish cage sanitation 2016	<ul style="list-style-type: none"> • A survey was conducted to gather data on the topic and on protective and preventive measures in other parts of the world and recommendations were formulated. • A work framework for monitoring sharks around the fish cages was developed. • A management plan for waste disposal (dead fish, the main factor attracting sharks) from fish cages in the open sea was prepared, as a major means of reducing the conflict.

Company	Subject, activity and years ¹¹	Products
		<ul style="list-style-type: none"> • The management plan for waste disposal from fish cages was integrated in the regulation proposal – in the regulations for preventing animal diseases (fish farming); the plan was approved and is integrated regularly in detailed plans submitted to marine agriculture planning authorities.
Israel Cotton Board	Cotton farming to preserve biodiversity (2020-present)	<ul style="list-style-type: none"> • Literature survey – cotton farming and preserving biodiversity • Pilot projects in three areas that included renewal of field margin vegetation, including endangered species as well as streambed stabilization and soil conservation (in progress). • The results of the project will be analyzed to determine policy and treatment protocol, followed by an implementation program.
Barkan Winery	Biodiversity-supporting vineyards (2020-present)	<ul style="list-style-type: none"> • Evaluation of existing protocols • Pilot projects in three vineyards: planting cover plants with endangered species (<i>Onosma gigantea</i>). • A pilot project to remove fences to reduce damage to Mountain Gazelles is planned (awaiting approval). • The pilot results will be analyzed and protocols and an implementation plan will be prepared.
Ein Netafim	Biodiversity preservation and improvement – local and migrating birds (2020-present)	<ul style="list-style-type: none"> • Current status characterization – documenting diversity, mapping endangered sites and locating a site for a tourism walkway for birdwatching. • Consolidating approved action plans, including treatment and management of reservoir bank vegetation, installing lookouts for birds of prey, establishing resting sites for

Company	Subject, activity and years ¹¹	Products
		<p>water birds and preparing a plan to promote environmental tourism.</p> <ul style="list-style-type: none"> • Future plans include additional conservation measures at the site, including dealing with shallow water areas, advancing local plant floating islands, installing designated equipment for preventing bird collisions with power lines.
Golan Economic Corporation	Reducing marginal effects in settlements and tourism projects (2020-present)	<ul style="list-style-type: none"> • Analysis of existing situation. • Proposing spatial guidelines for planning. • Specifications for integration in tenders.

Appendix B – List of Interviewees

1. Liad Ortar, Manager, the Corporate Social Responsibility Institute
2. Hanoch Ilisar, Programme Director, Environment, Yad Hanadiv
3. Nir Engart, Director National Planning, the Israel Nature and Parks Authority
4. Michal Akerman, CEO, Tabor Winery
5. Omar Armosa, CEO Timna Park
6. Dror Boimel, Director of Planning, SPNI
7. Avraham Ben-Yosef, VP Engineering & Technologies, Mekorot
8. Andy Benica, Program Officer, Environment, Yad Hanadiv
9. Adi Gamliel, Corporate Social Responsibility and Sustainable Development management, Netivei Israel
10. Avner Weiss, Environment, Safety and Assets Manager, Hanson Israel
11. Alon Zaks, Deputy Director, Natural Resources, Ministry of Environmental Protection
12. Sagit Haim, Quality Control Manager, MILOPRI
13. Ana Trakhtenbrot, Head of Biodiversity Section, Israel Ministry of Environmental Protection
14. Yitzhak ben Yitzhak, Maintenance Manager, Timna Park
15. Noam Leader, Head, Ecology Section, INPA
16. Rachel Lotan, Head of Urban Planning Department, Land Regulation and Sustainable Development, Israel Natural Gas Lines
17. Merav Magal, Head, Environmental Protection Division, Mekorot
18. Anat Mosanko, CSR director, MAALA
19. Moti Maayan, Regulation Manager, Central Bottling Company Ltd
20. Erez Siksik, General Manager for Planning and Maintenance, Netivei Israel
21. Yehezkel Smocha, grid division, Israel Electrical Company
22. Tamir Porat, CEO, Milopri
23. Moran Pinhas, Environmental Quality Engineer, Central District, Mekorot
24. Nir Papai, Deputy CEO of Nature Protection, SPNI
25. R, Chief Engineer, Security Plant (requested anonymity)

26. Tama Raviv, Head of Biodiversity and Open Spaces Division, MEP
27. Rafi Regev, Head of Infrastructure & Assets Dept., PEI
28. Vadik Rosenblit, organizational consultant
29. Dotan Rotem, Open Spaces Ecologist, Science and Conservation Division, INPA
30. Moshe Rahmani, director of supply chain , Tara Dairy
31. Ehud Shabat, Vice President Supply Chain, Tara Dairy
32. Dafna Shehori, Director, Environmental Impact assesments, Israel Electrical Company
33. Lee Steinberg, Director Planning and Environment, Mediterranean Coastal Cliffs
Preservation Government Company Ltd.
34. Yehoshua Shkedi, Chief Scientist, INPA
35. Barak Sarid, Agronomist, Tabor Winery
36. Rakefet Tibi, head of statutory planning, Mekorot