**SOCIETY FOR THE PROTECTION OF NATURE IN ISRAEL:**

**ANNUAL REPORT**

**RIVERS AND STREAMS**

Rivers and streams are Israel’s “circulatory system” – a network that winds through open spaces and developed areas across the country. They comprise an important habitat, essential for recreational activities, and a significant part of Israel’s ecological corridors.

**Watershed Basin Planning and Management**

1. We prepared a detailed legal document on integrated basin management in Israel, comparing the current situation to the desired situation, with descriptions of barriers, and proposals for legislative changes. The document reviews various models used around the world for integrated management of watershed basins.
2. We wrote an organizational position paper on integrated river basin management, with recommendations for institutional changes, processes, and planning related to drainage issues. We promoted our position and approach in meetings with stakeholders and decision makers.
3. We worked to raise the level of protection for the watershed environment by formulating and promoting joint positions on issues related to protecting and restoring rivers and streams and riparian areas among a forum of ecological (green) organizations: the Society for the Protection of Nature in Israel (SPNI), the Ministry of Environmental Protection, Israel Nature and Parks Authority, and KKL-JNF, in cooperation with the Ministry of Agriculture and the Drainage and River Authorities.

The outputs of the aforementioned activities were:

* We drafted national policy tools, with a chapter on natural water resources and open areas in the *Strategic Plan: Israel 2040*, pertaining to zoning and delineating river and stream boundaries from their source (top) to mouth (bottom), wetland habitats, and springs along rivers and streams.
* Together with Moti Kaplan Planners Ltd., we developed *A Planning Guide for Israel’s Waterways*, inspired by Israel’s *National Outline Plan TAMA 1*. The main topics include: a uniform language for river and stream management and planning, principles and guidelines for planning the restoration of rivers and streams and riparian areas, both in open spaces and developed areas. We were involved in launching the plan and the first stages of its implementation.
* We promoted a hydrological basis for the area that is necessary for the natural functioning of a river or stream, with solutions supported by this basis. *A Place for the River* integrates river restoration in open areas and flood damage prevention in extreme situations; determining the boundaries of a river’s flow corridor based on an eco-hydrological approach and engineering design; and promoting beneficial solutions (diversions and bypasses of excess flow). We wrote a report and presented it to government agencies (the Executive Committee, Ministry of National Defense). At a national level, we promoted the implementation of runoff management programs, and a demonstration project (presented to the Open Spaces Protection Fund).
* We promoted implementation of river and stream planning and basin management principles in national outline plans, regional plans, and drainage projects: TAMA 7/1, TAMA 47(n), National Infrastructure Plan 122, TAMA 75(nn), National Infrastructure Plan 33(a), the drainage plant for Nahal Taninim, and more.
* We formulated and promoted principles of river basin planning and river and stream conservation with the goal of assimilating them into policy documents proposed by the Planning Administration: urban runoff management, recommendations to the Executive Committee, basin management principles for the Planning Administration, and more.

**Water Quantity and Quality**

1. We promoted an amendment to the Water Law to prevent pollution of water sources, which included: discharge levies, financial sanctions, change of status and composition of the committee issuing permits. The amendment is based on a legal and economic opinion on levies for discharge into rivers and streams. A proposal was introduced in the Knesset, but the procedure had to be started again from the beginning with the new government.
2. We renewed a lobby in the Knesset for the rehabilitation of rivers and streams, to be reestablished with the new government.
3. We promoted an environmental perspective on the issue of connecting the upper region of the Sea of Galilee (Kinneret) to the National Water Carrier system in this era of climate change. We presented our position to decision makers and relevant governmental bodies, during discussions with the Water Authority, at conferences, and in the press. We submitted a petition to the Supreme Court detailing consequences and achievements: a public hearing with the participation of the director of the Water Authority; preventing a decision by the Water Authority Council on connecting the Kinneret to the Water Carrier (May 2021); further postponement of this action (July 2022) in the Water Authority Council’s decision regarding water sources.
4. Releasing the Slope Springs (in the Golan Heights): a lake reservoir plan to release the Slope Springs into several channels was presented to the Water Association, the Water Authority, and environmental organizations (enlisting KKL), and the Open Spaces Protection Fund. We discussed the impact of continued utilization of water from the Ein Divsha spring as a representative case that contradicts the plan to release the Slope Springs: in this case, plans to replace a water line that contains the springs was stopped. The campaign included public activity, cooperation among a wide range of organizations, publicity, discussions, and presenting alternatives that received support from the Water Authority. We drafted and promoted a new resolution for releasing the springs (see below).
5. We wrote and presented a proposal to decision makers for restoring river basin drainage: this is a continuation of a decision to restore seven streams, currently in four basins: Nahal Taninim, Carmel, Kishon, and the Hula.
6. We actively participated in research on the impacts of climate change on rivers and streams in Israel and wrote a summary report.

**Public Involvement**

1. A public coordinator for the Yarkon Drainage Authority implemented the following: development of communities near four rivers, in partnership with the local authorities (Lod, Or Yehuda, Rosh HaAyin, and Sdot Dan). We developed a professional training program on the subject of rivers and streams, in partnership with local authorities (Nahal Pardesim - Tel Aviv and Ramat HaSharon). The second year of the project will be completed in July 2023.
2. We developed partnerships with River and Drainage Authorities and River Authorities to promote community development and empowerment and public involvement on behalf of rivers and streams. We gained representation with the community around the Lower Jordan River; the Nahal Hadera administration; the Friends of the Nahal Association, which is active in the Arab community, and the Kishon Drainage and Streams Authority. We worked to strengthen cooperation between the Carmel Drainage Authority, the Hof HaCarmel Field School, and the local community.
3. We promoted events to raise public awareness about rivers and streams: the annual River Festival (in partnership with Agma), the third annual Carnival on the River, webinars, and training courses for tour guides.
4. We promoted joint responsibility among the stakeholders in Nahal Saadia: the Haifa Municipality, Association of Haifa Cities, the Ministry of Defense (national and regional), Israel Nature and Parks Authority, the Kishon River Authority, the Kishon Drainage and Rivers Authority, the Aquatic Center, and SPNI. A steering committee will include three teams working on the following topics: ecology, planning and community, and managing enforcement. A model will be developed for addressing challenges pertaining to rivers at the local level.
5. We began creating trans-organizational work plans for assimilating and promoting the issue of rivers and streams with various departments, in order to create resonance among organizations to successfully change perceptions of rivers and streams among decision makers and to recruit public involvement (Public Engagement Work Plan 2022-2023).

**ISRAEL ORNITHOLOGICAL CENTER**

Dr. Yoav Perlman was appointed director of the Israel Ornithological Center this year, replacing Dan Alon, who left the role after directing the Center for 27 years.

After the years of the Covid-19 pandemic, we returned to full-volume activity in 2022. Inbound tourist activity from abroad resumed. In the spring, we hosted a birdwatching festival in Eilat, as well as several lengthy tours for international birding associations in the spring and fall. Domestic birdwatching activities have resumed at the Israeli Ornithological Center and through birdwatching workshops held across the country. Educational and tourist activities have returned to their full scope at the Jerusalem Bird Observatory and the Eilat Ornithological Center. On September 22, 2022, the Israel Ornithological Center participated in an international conference to commemorate and celebrate the 100th anniversary of BirdLife International.

Habitat restoration, with an emphasis on wetland habitats, continues to be a central area of activity for the Israel Ornithological Center. Establishment of the Start-Up Nature pilot project in Kfar Ruppin continued, and its Amud Reservoir is becoming a high-quality and significant nature reserve for the entire area. Agricultural management activities, and the strong partnership with Kibbutz Kfar Ruppin and other project partners, have enabled the natural ecosystem to support a high level of biological diversity.

Efforts to establish a Birding Center in cooperation with Kibbutz Ma’agan Michael are progressing rapidly. A high-quality wetland habitat is being developed at one of their fish ponds. An impressive entrance hall has been built, in cooperation with the Hof HaCarmel Field School.

The Israel Ornithological Center is leading major efforts to expand habitat restoration activities in Israel. At the ground level, we are identifying and promoting new projects. At the policy level, work has begun to implement a habitat restoration policy in Israel. We continued collecting data to improve our understanding of the situation of the birds of Israel, and 2022 was the third year of this field work being carried out by hundreds of volunteers. Collecting information for the *Israel Breeding Bird Atlas* has been completed and the process of data analysis and processing has begun, in order to promote an information-based nature conservation policy. Extensive survey work was carried out in the Golan Heights, in Judea and Samaria and in the Nitsana area. A joint project with the Nature and Parks Authority to monitor breeding birds of prey in Israel continued. The Israel Ornithological Center is partnering with the Nature and Parks Authority on a special project to preserve the desert Houbara bustard.

After a hiatus due to the Covid-19 pandemic, the Champions of the Flyway project has resumed its international format. In a project called The Year of the Turtledove, resources were mobilized to protect the European Turtledove in Malta, Greece, and Cyprus. In Israel, the project was supported by the Ministry for Regional Cooperation. Teams of youth from countries around the world competed at the peak event in spring 2022, and the project culminated with a large and festive celebration at the Ornithology Center in Eilat. This event was followed by two workshops at the end of the year, attended by participants from countries around the Mediterranean and the Middle East, including the Caucasus, the Balkans, Jordan, Egypt, and even the Palestinian Authority. The highly successful event established the Israel Ornithological Center as a regional leader in nature conservation, and an appropriate infrastructure for international cross-border activities to maintain bird migration routes.

The Jerusalem Bird Research Station continues to be a national hub for birding activities. The Israel Birding Club began many of its activities there, including dozens of tours for families from throughout the country, and high-quality birding workshops for the general public and for expert ornithologists. The Jerusalem Bird Research Station is the base of operations for birding clubs around the country with participants of a wide age range, and for a national birding club for youth. The research station is striving to increase diversity in the community of birdwatchers in Israel, with targeted activities to encourage female ornithologists.

The Ornithology Center in Eilat, which operates in partnership with the Eilat Municipality, KKL-JNF, the Nature and Parks Authority and the Eilat Regional Council, is taking great strides to develop the its natural infrastructures and facilities to accommodate the public. In addition to their extensive activities in the park, the Ornithology Center’s team leads research and nature conservation activities in the Eilat area and the Southern Arava. The Center is conducting a wide range of pioneering activities that have national and international value and impact, such as transforming the Eilat sewage reservoir into a high-quality wetland nature reserve.

The Israel Birding Portal’s online camera project has entered its seventh year, and continues to break boundaries and have a massive impact, transmitting images and information across the internet. In 2022, for the first time, a camera was placed near the nest of a Bonelli’s eagle (*Aquila fasciata*)*,* and broadcast dramatic incidents never before shown on the screen. The Birding Portal project has reached millions of followers in Israel and around the world. This project, conducted in cooperation with the Nature and Parks Authority, continues to prove itself as a crucial tool in nature conservation. The Israel Birding Portal website and its related social platforms are a key hub for information about birds and ornithology in Israel. The website features high-quality, varied, and changing content, making important and up-to-date information about the activities of the Israel Ornithology Center available to the general public.

**KEREN HADUKHIFAT (THE HOOPOE FOUNDATION)**

Keren HaDukhifat was established 11 years ago, with the goals of raising resources to promote projects for the conservation of birds and their habitat, initiating studies and surveys that support bird conservation, educational activities, and activities that expose the general public to this issue.

In 2022, Major General (res.) Doron Almog resigned from his position as chairman of the foundation, after being elected as the chairman of the Jewish Agency. He was replaced by Brigadier General (res.) Dr. Alaa Abu Rochen, who was the military secretary for the Israeli president. We would like to express our appreciation to Doron Almog for his dedicated activity on behalf of the foundation for ten years.

Over its years of existence, Keren HaDukhifat has supported over 45 projects, including ongoing support for a project promoting barn owls as biological pest control agents in agricultural areas. With their support, this project expanded to become a national project and then an international project. Two decades ago, participants from Jordan and the Palestinian Authority joined, in 2015 it expanded into Cyprus and Greece, and in 2022 it was joined by Morocco, following the signing of a normalization agreement with Israel.

Each year during the Hanukkah holiday, Keren HaDukhifat hosts a learning day. This year it was attended by 1200 bird lovers, teachers, and academics. This tradition has continued for 43 years!

Every year, Keren HaDukhifat produces a book on ornithology. In 2022, Prof. Yossi Leshem’s book *50 Years of Birding: To Fly with Birds and People* was published in collaboration with the Society for the Protection of Nature and Yedioth Books. Within two months, the first edition of the book sold out.

These are just a few of the many examples of the extensive activities of Keren HaDukhifat, which is an integral part of SPNI, managed by representatives of SPNI’s administration: Shay Teitelbaum (Chief Financial Officer), Dan Alon (Deputy Director of Nature Conservation), and Dr. Yoav Perlman (Director of the Ornithology Center), together with Prof. Yossi Leshem (Secretary of the Foundation), Prof. Yoram Yom-Tov (Tel Aviv University) and Prof. Ido Izhaki (Haifa University).

**THE MEDITERRANEAN SEA**

Maritime space in the Mediterranean Sea comprises half of the territory under the control of the State of Israel, and is the largest natural area managed by the State. The natural marine ecosystem provides essential services for our life on land: producing oxygen, mitigating climate change, providing protein sources and innovative medicines, and opportunities for tourism, recreation, and education. A healthy sea enables management of risks such as the collapse of coastal cliffs, jellyfish outbreaks, and the spread of poisonous invasive species.

However, the Mediterranean Sea is on the verge of an ecological disaster.

Aggressive overfishing, lack of supervision, and outdated legislation have brought Israel’s territory in and along the Mediterranean Sea to the brink of collapse. Fish and marine animals are being destroyed at a rapid rate; many are tossed back into the sea dead, before they can reproduce or grow.

In 2022, we continued and even intensified our actions to protect the Mediterranean Sea and Israel’s maritime nature reserves. Two new large marine nature reserves have been announced, significantly expanding the protected maritime area in the Mediterranean. The protected marine reserves in the territorial waters of the State of Israel have increased from 0.25% of the area when we began our efforts, to 4% today.

Following these achievements, our main area of activity now involves striving for even more maritime areas to be designated for protection in Israel’s national planning policy. This year, a marine reserve was approved, comprising 1.7% of Israel’s territorial waters in the Mediterranean Sea; the new reserve will soon be officially declared. Also, for the first time a protected marine area, the Glishat Palmahim (Palmahim Slide), was designated in Israel’s Exclusive Economic Zone (EEZ) in the Mediterranean Sea (the marine reserves are all in Israel’s territorial waters). The new reserve covers an area of about 450 square kilometers, which comprises 2% of Israel’s EEZ.

Another innovation was the Caesarea Marine National Park adopting the “safe sea” principle to protect human users and nature, by banning fishing and other exploitive uses within the park.

Towards the end of the year, we updated and renewed our Sea Watch app, which allows users to report various hazards at sea. This app is an important tool for enforcing the regulations and laws that protect marine nature, and allows the general public and professional sea users to participate in the important effort to protect the sea.

**THE EDUCATION AND COMMUNITY DEPARTMENT**

In the past year, we launched, developed, and deepened various processes in the education department:

1. We held cross-organizational training courses to implement SPNI’s core issues.
2. We held in-depth meetings every three weeks at the forum’s education headquarters in order to synchronize and enrich our educational activities.
3. The education department held a content meeting for all its coordinators and managers.
4. We maintained and deepened our relationship with the Ministry of Education’s Director of Tours and Shalach (the branch for Learning the Land, Nation and Society).
5. We adapted activity in the Arab sector to a changing budgetary reality in the era of the Ministry of Education’s Geffen program.
6. We have filled all the positions in the training department and the research, development, and training department. These departments have worked hard to fulfill their mission within and outside the organization.
7. We expanded security and safety training through new educational computer programs and wrote professional training material in this field.
8. We filled all the positions for training coordinators for the scouting clubs. These coordinators work closely with the regional managers and assist in the content development and professional development of the teams for these departments.
9. We improved the conditions for accessing the guides’ database in order to include all the organization’s guides.
10. We laid infrastructural foundations for the expansion of the placement system for all of the organization’s departments.
11. We accepted the critiques and suggestions of the interior auditor regarding the educational promenade and the scouting clubs.

**THE ARAB COMMUNITY**

In the past year, we held a large number of varied activities for Israel’s Arab population. Our dedicated and experienced team of managers, coordinators, and instructors expanded these activities and adapted them to the needs of the Arab education system and the requirements of the Ministry of Education, as well as to local initiatives in various places. We implemented environmental education for the Arab population in five areas across the country:

1. The Center: we held activities in five localities, including about 150 environmental education classes with eight meetings for each class, three large “calls for proposals,” and five River Guardian classes.
2. The North: we held thousands of meetings in 22 settlements (in two regions) including 600 classes from first to sixth grade, with eight meetings per class. In addition, we issued five calls for proposals for about 20 more schools, held Geffen programs, and 30 classes in the River Guardians project. We also held 150 day-long educational hikes.
3. Circassian/Druze communities: we held activities in 18 localities in 98 preschools with 13 meetings per class, and about 250 environmental education classes in grades 1-6, with 13 meetings per class. We issued five calls for proposals and 300 days of instruction on the educational promenade.
4. The South: we operated environmental education programs for grades 1-6 in ten schools in two settlements.
5. East Jerusalem: we offered classes in 22 schools, with 13 meetings for each class, which included seven field trips and six class meetings per year. In addition, in two special education schools we offered an environmental-social initiative and a two-day event on campus.

**Clubs/Extracurricular classes:** We run some 56 clubs, which have 14 annual meetings each. Some operate as part of a camp and some as an environmental-social initiative.

**Training and alumni**: We started four ongoing groups for alumni who travel with us for professional enrichment training. We held 15 continuing education programs for teachers, two training courses within the education system (“standard mark”), four campuses, four day-long training courses, one course in first aid, and one in safety training. In addition, we held a 10-day environmental journalism course for Arab journalists in Israel, including a national campus.

**TRAINING**

We intensified and strengthened our system for instructor training and continuing education programs throughout the year:

**Internal Training Courses**

1. Climate crisis training courses: Managers and coordinators participated in departmental training courses that addressed the climate crisis. Additionally, we held regional cross-organizational regional training courses that presented the impact of the climate crisis at the local level. These trainings connected departments in geographical areas, strengthened local ties, and encouraged cooperation in the face of local environmental challenges. We held four continuing education courses for experienced teams and for new teams.
2. Under the auspices of the field schools, a “Great Women” course was held for female students in their second and third years at field schools, just prior to the reception of the new groups of youth. These included five days of content, enrichment, professional training, and preparation for the reception of the new cohorts to the field school. They became familiar with the most pressing challenges in nature conservation. We focused on spending full days on extracurricular learning and delivering educational content via distance learning.
3. Training the next generation: through national and regional courses, the next generation of guides became familiar with SPNI and its challenges, and received professional training to familiarize them with the various regions of the country and training tools, for the purpose of becoming certified as guides, with an emphasis on experiential learning, research, and self-learning.
4. Scouting courses: We expanded the course for training scouting counselor teams to prepare them for instructing scouting groups, familiarize them with the area, and to provide them with training tools. During the year, the instructors for the scouting groups undergo weekly training courses to expand their professional knowledge regarding the responsibilities of this field.
5. Tour guides: For the first time in several years, the tour guides joined the field school training course and received certification as tour guides for the education system. This training will allow them to expand their activities and to provide more diverse guiding to different audiences and in different places.
6. Environmental education: A training course was held for new instructors in the field of environmental education.
7. National Tourism Department: A continuing education program provided training for tour guides and authorized courses for renewing tour guide certification. We also offered an end-of-year continuing education program, continuing educational programs about rivers and streams, and a two-day field trip (trek) at the beginning of the year.

**External Training Courses**

1. Training courses for tour guides for the public: The first training course for tour guides catering to the Haredi (ultra-Orthodox Jewish) sector was completed, and a new course has opened.
2. Certification courses for licensed educational tour guides: We offered three training courses to receive official tour guide certification from the Ministry of Tourism this year. Many course graduates became employed with the National Tourism Department.
3. Regional campuses: We established regional campuses, so that tour guides may add a region to their certification. This year we held 11 campuses (six as part of the national training and five for the general public).
4. Training courses for renewing tour guide certification: We carried out eight content training courses for renewing tour guide certification, and 14 training courses for refreshing certification in first aid, security, and safety.
5. Tour guide training in the Arab sector: We conducted an instructor course in Sakhnin, four regional campuses, and three continuing education courses to renew tour guide certification.

**Training at Field Schools**

There were many personnel changes at the field schools in 2022. We hired a manager for the field school department. Administrators, training coordinators, and instructors were recruited for various units. We recruited a coordinator for the field school department, who assists with training coordinators in the various units to carry out their duties and to support them in transmitting an updated educational approach. In order to increase the professional personnel in field schools, we increased the standards for graduating from the training units to achieve the target of over 1,100 training days. New managers were trained in management courses.

We refined the direction for management by defining performance targets for the various units that include quality indicators and performance standards. The units have achieved full and accurate application of the timetable for the integrated training placement system.

We held a conference regarding the educational promenade, in collaboration with various entities. The need for public and professional support for the educational promenade arose.

We held national initiatives for the general public on topics such as astronomy, the Israel Land Authority, and various activities within the framework of Shalach (Land, Society and Nation) and the Society and Youth Administration.

We developed an activity booklet about the sea.

We helped with a call for proposals for youth movements on the seashores.

We established a national youth club: high-quality tours for youth were reinstituted, with the goal of creating a core of volunteers in their National Service year.

Environmental challenges: we strengthened the field schools’ connection to local environmental struggles. The various units expressed this in their work plan, as well as in promoting nature conservation in practice.

**SCOUTING CLUBS**

After two years of limited activity due to the Covid-19 pandemic, in 2022 we worked to reestablish and expand scouting club activities. In every region of the country, there was a notable increase in the number of members, which peaked at about 1400 active members. The scope of the activity, including field trips and campouts, also increased and hundreds of young people participated in each of the activities.

At the same time, we made structural-organizational changes that strengthened administration of the scouting clubs. We added the position of a training coordinator for each region. This allows us to expand our activity, and emphasizes the quality of the training and providing the best response to the instructors’ needs.

Broadening our activities:

* 1. Most regions have increased the number of trainees working in the group activities, thanks to the regional managers’ energetic efforts and a targeted recruitment campaign.
  2. We have recruited training coordinators in all areas, and clarified the definition of their role in the field of recruitment and management of the commune.
  3. We improved the computer interface for parents to register and pay for the tours. This improved the relationship with the parents.
  4. We conducted field skills workshops for the Israel Defense Forces (IDF). Our excellent instructors trained soldiers and commanders for better activity in the field.

Deepening our activities:

1. We developed a multi-year rationale for activity. By training coordinators, we deepened the annual program content.
2. We redefined the regional managers’ role, giving them broader control and better conditions for performing their role.
3. To improve the relationship with parents, we set up a permanent line in each region for their inquiries.
4. We refined the staff training procedures.
5. The organization’s internal auditor conducted a review, noting important points regarding the groups (clubs), which we are working to correct.
6. We held a practice emergency safety event, and refined the procedures for functioning in an emergency.

**COMMUNITIES AND CENTERS FOR FIELD STUDIES**

Despite the multiple challenges we faced (mainly internal), we continued to operate in the educational field, mainly through ongoing programs for education on the environment and climate. Our flagship programs, such as the River Guardians and the Ecological Yard, address urban nature near people’s homes and the need to adopt a sustainable lifestyle.

We paid special attention to the issue of climate change, and how nature can serve as a shield and help us cope with these changes. In the Centers for Field Studies and in some communities, we took students on outings in their local area. During Urban Nature Week, which is held every March, students in environmental education classes participated in a major bird counting event and special activities in the schools.

**Environmental education**. During 2022, approximately 40,300 students and teachers in schools and preschools participated in environmental education programs, including participants from the Bedouin sector in the Southern region and Haredi society. For the first time, we operated in the Chabad preschools in Kiryat Gat and conducted sustainability training courses for managers and supervisors of daycare centers.

This year, also for the first time, we offered programs approved through the Ministry of Education’s Geffen system. We hope that this will enable us to reach a larger and more diverse audience.

**Public events.** During public events held throughout the year, we reached some 41,000 citizens from a wide range of communities. Events and tours took place in cities and at nature sites, including threatened areas and open spaces, by streams and rivers, and on the seashore. At these events, we emphasized to the public the importance of maintaining rich biological diversity and discussed issues relevant in each region.

We always made sure to include the issue of the climate crisis and to suggest solutions that can be reached by maintaining a healthy natural ecosystem. A number of community events took place in various communities and Field Study Centers, near the marine reserves in Achziv and Haifa, by streams in the north, in the wadis of Haifa, in the threatened Gazelle Valley, in the Modi’in region, in the winter pools in Ramat HaSharon Park in Gush Dan, and of course, in the Jerusalem hills. Using new social media tools, we maintained a continuous online connection with groups and activists and were able to provide assistance and tools to meet their needs that arose. We participated in the Influencers’ Conference for activist groups, which has been held for the past several years, and SPNI offered a session on planning issues and filing objections.

**Special Events and Activities This Year:**

* A course on sustainability for Bedouins in Berhat
* An environmental activism course for Technion employees
* Establishing a new salamander monitoring group
* Training for Technion employees on sustainability and nature
* Integrating the Beit Ussishkin Museum into the “Israeli Shabbat” project, which resulted in a record number of visitors
* An environmental event at Beit Levi Eshkol in preparation for the Knesset elections
* Training for volunteers doing their National Service year with the Centers for Field Studies to receive tour guide certification (standard mark)
* And more!

As a leading organization in the field of environmental education, we are significant partners in the Climate Coalition’s forum of Educational Organizations. We were also leading partners in the 19th Annual Environmental and Sustainability Conference held at Beit Berl College, where we offered a session on nature-based solutions to the climate crisis. We played a central role in a conference on this topic organized by the Knesset. We made sure to bring attention to issues from the periphery to the capital city. A representative of a group of National Service year volunteers, organized by SPNI at the Field Studies Center in Kiryat Shmona, spoke at the conference on behalf youth and young environmental activists. The conference was attended by about 150 of our employees, service year volunteers, and their team of instructors, from all over the country.

As part of the Climate Coalition, we were primary organizes of the Climate March held in Israel just before the UN Climate Change Conference in Sharm el-Sheikh, Egypt in November, 2022. The march drew some 15,000 participants. Our environmental education team took a strong stance on behalf of the hundreds of students, families, and SPNI members and activists who joined the march to demand that practical actions be taken in this area.

**THE NEXT GENERATION**

We continued to improve our selection and recruitment processes for the next generation of environmental activists, as well as organizing social support and strengthening the relationship with program alumni.

A coordinator for the next generation has been hired, and we wish her great success.

We improved the recruitment processes through a targeted, funded campaign aimed at 12th graders. The human resources team and the education staff helped us refine the selection process in such a way that in the brief meetings with candidates we receive accurate and professional information about them, while at the same time giving them relevant information about the organization and the training units for which they have been selected. Our screening system was adapted to the new requirements of the Ministry of Defense and the Ministry of Education, in order to more accurately match the candidates and the required criteria.

We recruited and trained social mentors to support the various communes. We meet frequently with the mentors, and they provide us with important information that helps us solve problems and improve the work of the team in the commune.

We participated in a round table forum with the Ministry of Education regarding the National Service year. This helped us to learn and teach about the communes’ work in an optimal way and to cooperate with parallel educational bodies.

We held an activity for alumni and intend to maintain contact with them through social networks.

A “hackathon” was held for youth to collaboratively come up with ideas to help solve SPNI’s challenges in preserving the landscape in the Golan Heights.

**CONTENT DEVELOPMENT AND TRAINING SUPERVISION**

In the past year, we stabilized this department, filled all the available positions, and dealt with various development issues.

**Supervision of Training**

We recruited and trained an activity manager and team of supervisors. We refined the oversight process in order to better serve the needs of the system. This includes: feedback from reviews of instruction for the training and field work units on a variety of topics such as security and safety, use of teaching aids, familiarization with SPNI, clarity of the organization’s messages regarding nature conservation issues, etc.

We held training days for the organization’s external and internal auditors, training coordinators, and unit managers. Every quarter, the audit findings will be presented, in order to help us better understand the broad challenges being faced as well as points that should be preserved, regarding training in the organization.

**Technological Development**

The technology coordinator maintains the “Chameleon” knowledge management system for all the organization’s departments, through newsletters and in a dedicated WhatsApp group. In the last year, we worked on a system gateway for coordinators and managers, a gateway for implementing environmental education, and a gateway for the open spaces projects, in order to disseminate content via the Chameleon system to the general public. We developed a study on security and safety. Currently, we are in the process of developing two additional educational computer programs.

**Development of Learning Materials**

We provide develop learning materials and offer services for developing materials, to various entities, both internal and external. We have developed training systems for the Education and Youth Corps, various local councils, individual departments within the organization, the foreign relations department, and more.

**Development of Geffen**

We have uploaded dozens of programs into the Geffen system (an online system for managing flexible resources offered by the Ministry of Education) in order to provide programming to the education system.

**Developing and Training Teams**

We reinstituted a cross-departmental and cross-organizational development and training team to support content development processes in various areas. The team discusses fundamental and broad issues covering our activities overall. This think tank integrates a wide range of fields from the education department and encourages broad internal collaborations.

**THE ISRAEL NATIONAL TRAIL SYSTEM: TRAIL MARKING**

In 2022, we published a new edition of the *Israel Trail Guide* with updated maps showing trail markings for five maps: numbers 2, 9, 10, 19, and 20.

We also published a collection of Israel Trail Maps with 54 maps showing segments of the Israel Trail from Tel Hai to Eilat. The new collection has several improvements. The Israel National Trail route in the maps has been updated to show changes that have made to the trail in recent years. The cover was updated. The maps were produced in a clear and high-quality format. The A4 sized maps are printed on both sides of the page, which reduces the weight of the booklet by half. Its price has been significantly reduced.

In 2022, we also continued our trail-marking activities in the field:

1. The Israel Trail to Mount Hermon: coordination and planning of the Israel Trail in the north continues, with various local authorities and other stakeholders contributing to planning the route. We hope to finish the preparatory work soon so that it will be possible to mark the Israel Trail to Mount Hermon.
2. The Israel Trail passes through the Tel Afek and Yarkon Sources National Parks. Due to extensive works to expand the railroad in this area, the trail route through these parks was moved for hikers’ safety and enjoyment.
3. The Megiddo Trail. A new stretch of trail, about 70 km in length, is being prepared in the Menasha heights. The planning and coordination aspects have been completed and parts of the trail have already been marked. We hope to soon complete the preparations and the marking, so that it will be possible to inaugurate the new trail.
4. Planning additional trails. On an ongoing basis, we review applications and initiatives for new trails. We are in the planning phase for marking several new trails.
5. Ongoing maintenance of trail markings. The hardworking team continues to maintain and renew the trail markings according to the work plan.

**THE CLIMATE CRISIS**

The climate crisis is arguably the largest challenge we face today. In the past, SPNI did not treat the climate crisis as a separate issue, but viewed it as an integral part of our struggles in the field of nature conservation. However, in the last two years, we realized that we must address the climate crisis in a clear and direct manner, and that we have a unique and important role to play. Within the tremendous effort to reduce global emissions, there is one extremely significant factor that is essentially ignored - nature.

**Formulation of climate policy and strategy**. In the second half of 2021, SPNI began to address this topic, and subsequently, in 2022, we formulated the organization’s policy and strategy regarding the climate crisis. In the first stage, we examined and analyzed perceptions of the issue among the professionals within our organization, what is being done by major nature conservation organizations around the world, and professional positions among major international entities. In the second stage, we conducted a mapping to clarify the role that SPNI can play, among the multitude of organizations in Israel, and to select our key objectives. First among these objectives is highlighting the importance of healthy natural systems in dealing with the climate crisis. In the third stage, we formulated policies and drafted key messages to guide the organization’s activities pertaining to the climate for the coming year.

**Building an infrastructure of knowledge about the climate and ecology.** A central part of the organization’s strategy in addressing the climate crisis is promoting recognition of the importance of natural systems as an important tool for dealing with climate change. To this end, we started the process of building a knowledge infrastructure about the climate and ecology.

We wrote a document entitled *Nature-based Solutions to Address Climate Change,* to be submitted to the Ministry of Environmental Protection in the first quarter of 2023.

We initiated and led a professional conference on “Nature restoration in the era of climate change from a regional perspective” in cooperation with the Nature and Parks Authority and the Konrad Adenauer Foundation. A number of senior government officials, representatives from academia and other organizations, and guests from Jordan and Morocco, participated in the conference. The conference marks the beginning of collaborative professional work to develop a national plan for restoring natural systems in this era of climate change, including an effort to encourage cross-border cooperation.

**The Global Climate Change Conference in Sharm el-Sheikh**. We took an active role in a side session at the conference on nature restoration and climate change, and presented projects related to rewilding and urban nature. We were supporting partners in a flotilla demonstration to protect the Red Sea and protesting the trans-Israel pipeline deal to transport oil through it. We are part of a network of nature conservation organizations that followed the discussions at the climate conference and advocated for inserting stronger clauses regarding nature conservation and addressing the climate crisis.

**Establishing local and international collaborations.** 2022 was a year of forging collaborations with international and local environmental organizations, and partners from the private sector, government officials, and academia. Additionally, SPNI is leading an initiative within the President’s Climate Forum, which includes restoration of wetland habitats in the toolkit for dealing with climate change. We are cooperating with a start-up company that measures the extent of carbon sequestration, at a restoration project in Kfar Ruppin. We have begun examining research cooperation opportunities with universities.

**Forming an energy policy coalition.** The struggle to preserve nature often collides with the energy-based economy, due to the continued development of polluting energy sources and energy policies that are destructive to the natural environment. SPNI is leading cross-organizational cooperative efforts to establish a uniform position on both these dimensions. Following lengthy negotiations, and against the background of conflicts with the National Planning and Building Council on the development of solar energy and wind turbines in open areas, SPNI and other major environmental organizations formulated a document of agreed-upon points regarding a renewable energy policy in Israel. The document promotes: dual-use siting of solar panels in areas that are already developed or disturbed; internalizing the costs of greenhouse gas emissions and other externalized costs; a decentralized energy economy; budgeting and financing a transition to renewable energies; and more. As a next step, we seek to lead the coalition of environmental organizations to formulate positions that will advance Israel towards a zero-emissions energy economy while protecting our natural marine and terrestrial ecosystems.

**EDUCATIONAL AND PUBLIC ACTIVITY**

**Climate March**

Our climate team launched the year’s educational and public activity with the Climate March -- the largest of its type in its history. In addition to our usual role as full partners in production, content design, resource mobilization, and more, we set ourselves the goal of harnessing the Climate March to create meaningful action on the ground. We encouraged parade participants to view a healthy natural environment as a solution to the climate crisis. We created an experiential activity lasting 15 minutes (only!) that teaches about the natural mechanisms behind global warming, how climate feedback works, and how a healthy natural ecosystem can restore climate balance. Dozens of teachers, students, and families acquired new environmental insights through this activity.

In collaboration with the group Adama Chaya (Living Soil), we created a mixture of seeds from soil-rehabilitating plants and, with public participation, distributed some 125 kg of it throughout the country. This special seed mixture is the product of some 200 years of scientific and cultural development. It is specifically adapted to Israeli habitats, and can restore vitality and fertility to neglected lands, abandoned lots, and damaged public spaces. An estimated 100 dunams of land were rehabilitated through this initiative. After the first rains, these lands will begin to contribute to cooling the night air in their area, flood control, improved groundwater quality, and soil fertility.

**Content Development and Training About the Climate**

In 2022, the issue of the climate was brought to the forefront of all SPNI training sessions. Training dedicated to the issue of the climate was given to all instructors, coordinators, and managers of field schools; teachers in schools and preschools in all secular and religious (Jewish) sectors and in the Arab sector; service year volunteers; and scouting group leaders. The content was adapted to each target audience, and appropriate instruction tools and methods were designed. We continue our efforts to make the issue of the climate crisis clear and accessible to everyone. At the end of December 2022, we began our first training sessions on the climate that were held outside a classroom setting, in which we taught about the connection between the climate crisis and nature through observations and field experience.

**Regional youth meeting in Morocco.** We led and moderated a meeting between young representatives from Morocco, Turkey, Jordan, and Israel on the topic of the climate crisis and its challenges. This was part of a joint project between SPNI and the Jordan Valley Regional Council, funded by Israel’s Ministry for Regional Cooperation. Prior to the in-person meeting, there were two months of Zoom meetings and joint learning with top lecturers from SPNI and other organizations. We have set out on a journey with our Moroccan partners to learn together and come up with new climate initiatives. This includes workshops, introductions to local projects in Morocco on topics such as green construction and renewable energies, and meetings with opinion leaders, and government representatives. We are preparing for the continuation of the relationship between the participants and the implementation of ecology projects that participants will lead in their countries of origin.

**CONNECTION WITH THE PUBLIC**

***Nature needs people to care for it - so that it can take care of us.***

The public in general and SPNI members in particular are the driving force behind the largest and most successful struggles we conduct in the field of nature conservation and protecting the environment.

**Social Media**

**Our ultimate goal**: to lead SPNI along a fresh and vital path in the public arena.

**Our strategy:** reviving the relevance of the SPNI brand, focusing our message on preserving nature, increasing the number of members, and expanding their involvement in the organization’s activities.

**Our action plan:** Rebranding, developing online products and tools, reconstructing the organization’s story, defining core areas and expressing them in our plans and designs. We want to make content about nature accessible to the general public and instill in them a desire and sense of obligation to preserve it. We will redefine and reposition the meaning of “membership” in SPNI, and clarify motivations for membership in terms of identity, ideology, and impact, in addition to SPNI’s guided tours, which remain part of the agenda and means of involvement.

**Success Indicators:**

* + - Raising awareness of SPNI, emphasizing young target audiences
    - Increasing the number of members, with a goal of 40,000 households by the end of 2023
    - Increasing members’ involvement in the organization’s activities (quality goal)
    - Increasing the proportion of young people among the community of members

**What About the New Website?**

On the website, we opened a “tour store” and “map store.”

The Beehive: information about meetings to expand and deepen our exposure.

Talkhouse: conversations for members of SPNI on new topics and from new angles

**First Data from the New Website**:

During the launch period, over half a million users entered the site and 1.5 million pages were viewed. Use of the new website is increasing steadily: there was a 55% increase in the number of users from 1,293 to 6,188, and a 37% increase in the number of pages viewed from 1,763 to 4,558.

Young people stay longer on the new site: a 14% increase in the average stay time of 18-24-year- olds, and a 9% increase in the average stay time of 25-34-year-olds.

Greater digital accessibility on the new site: social media, newsletters, and campaigns. There was a sharp increase in the rate of hits on social media: 12% on the new site compared to 8.1% on the old site.

The ten online SPNI articles with the greatest exposure in 2022:

1. Things you didn’t know about the Israel Trail.
2. Things you didn’t know about bees.
3. Everything you should know about trail marking.
4. What is meant by *danger of extinction*?
5. Tips for first-time hikers.
6. Must see places in Israel.
7. How do you make a change? How we convinced an entire country not to pick wildflowers.
8. What are the most common birds near your house?
9. The Ten Commandments for travelers who love nature.
10. Everything you need to know for the Climate March.

**Daily Online Presence: Organic and Sponsored Promotion**

Social networks (organic): daily management of our presence on Facebook and Instagram, and recently TikTok.

Data on sharing and accessibility of the organization’s activities and contents on social networks:

Reach: During the last year, 2,156,812 people were exposed to our content on Facebook, representing a 23% increase. In the past year, 42,000 users visited our Facebook page, and 26,000 users visited our Instagram account.

Sponsored promotion on Facebook and Google:

During 2022, 72 campaigns were promoted. During this period, our ads were shown approximately 19 million times to 6.1 million unique users on Facebook. These ads received about 27,000 likes, 2,000 shares, 1,800 comments, and 1,600 of the posts were saved for viewing at a later time. The target audience that is most exposed to our ads and most likely to click on them are women aged 35-44, followed by women aged 44-45 and 65+.

**SPNI Newsletter:**

We publish two monthly newsletters. The first, sent at the beginning of each month, covers all SPNI activities, with a blog written by the organization’s director and articles by prominent nature conservation writers and activists, with additional relevant activity in other areas. The second, sent in the middle of each month, is about the organization’s activities for members and the general public. Each newsletter is sent to 60,000 members and interested parties, with a 30% opening rate. Occasionally, special appeals are sent to members.

**Managing the Community of Members**

We are developing a work plan for recruiting new members and building a community of members, with a newly defined concept of membership: along with offering ideological value to members, we offer added value for free or at a nominal cost to participants, and more.

We are making efforts to increase the audience reached by our website and social media, and to develop and strengthen this communication channel, which connects members, tour participants, and the general public with the full range of the organization’s activities. We are convinced this is a long and complex process will bear fruit.

**Communication and Publicity**

According to the data from Ifat Group and Scooper, in 2022, SPNI had 3990 mentions in the media (an average of 332 per month). Of these,1840 were in the written press (an average of 153 per month), with 520 in the national press and 540 in the local written press. There were 550 mentions of SPNI on national and local television and radio stations and online news sites (an average of 45 per month).

According to the Ifat Group, the exposure value of publications about SPNI in 2022 in the written press (1840 articles in the national and local written press, not including television, internet or radio), that is, the monetary value (which calculates the list price of the article space, with the prominence of keywords in the item that are related to SPNI) is NIS 20.3 million, with an average of NIS 1.7 million per month.

Articles that mentioned SPNI in 2022 appeared in the most prominent communication media outlets in the written press, on the radio, television, and websites, and covered a wide variety of topics: nature conservation, urban nature, planning, ornithology, education, urban and community activities, wild animals, the Israel Trail, field schools, streams and rivers, the climate crisis, the Nature Defense Force, tours and hikes, and more.

**Major Television Coverage of SPNI in 2022**

**Kan 11:** Television programs covering our Start-Up Nature initiative; the campaign against construction at Poleg Beach in Netanya in preparation for the Maccabiah Games; the problem of dumping construction waste in open areas; our Raptor NestCam initiative; the struggle against establishing new residential areas; our initiative on behalf of big cats in Israel; the marking of the Megiddo Trail; and an article about use of disposable products in Israel, produced with the assistance of the Sde Alon Tabor school.

**Saturday edition of News 13**: Coverage of the effort to protect gazelles in Itamar as part of a Nature Defense Forces project; a segment about the blooming of Egyptian lotus (*Nymphaea nouchali*) in Nahal Saadia in Haifa, a flower that SPNI is struggling to preserve; and the campaign against building a new promenade in Eilat.

**The main channel of News 12:** Programs on the annual butterfly count; a tour with Amir Balaban on the one-year anniversary of the wildfire in the Jerusalem hills; a project to build drinking pools for sandgrouse by the Shivta army base; and wild animals that have been harmed by garbage.

**International Relations**

As the largest nature conservation organization in Israel, SPNI has been cooperating with nature conservation organizations around the world for years. We are part of a network of veteran nature conservation organizations that lead nature conservation activities in their countries, such as the Nature and Biodiversity Conservation Union (NABU) in Germany [**https://en.nabu.de/**](https://en.nabu.de/) and Legambiente in Italy [**https://www.legambiente.it/english-page/**](https://www.legambiente.it/english-page/)**.**

These organizational collaborations enable us to exchange knowledge in areas of common interest such as: the climate crisis, environmental education, community environmental activities, wind turbines, water issues, bird migration, and more. This partnership improves our employees’ level of professionalism and allows them to share and receive knowledge with colleagues abroad, such as research studies conducted by these organizations, and various activity and educational plans.

Starting in 2011, we promoted cooperative initiatives with the European Union and underwent through the EU’s accreditation process, which allows us to exchange delegations of employees and volunteers with EU countries and other countries in the Mediterranean region. In this framework, SPNI hosted a number of delegations and conferences with European nature conservation organizations and showed them the activities we do with the general public and with youth in particular.

Despite the ongoing Covid-19 pandemic and the restrictions on travel and interpersonal meetings, from the beginning of 2022 we had Zoom meetings with partners from other countries on various topics and eventually began hold face-to-face meetings again. The first meeting was with RESourCE, a project with the EU. In 2018, a community-supported agriculture (CSA) organization from Italy approached us with a request to join an environmental education project, together with partner organizations from Germany, Spain, and Hungary. Our organization was highly receptive to this project, which had the added value that people in SPNI’s various departments could utilize their professional abilities and showcase our recent and extensive environmental education activities. The project began in 2019, paused during the pandemic, then resumed in October 2021 with meetings in the various countries.

Representatives of SPNI visited all the European organizations that participated in the project. Each of them presented their activities and the issues they emphasize in the environmental education programs they offer in the schools and institutions where they work. We met environmental activists from local organizations that work on issues such as cleanliness and zero waste, for example: festive cleanup days, “do it yourself” workshops and more. We had discussions, conversations, and sharing with members of the various delegations. It was exciting and gratifying to see that there are a variety of organizations around the world promoting education for sustainability, connecting with nature and the environment, and preserving our planet for future generations.

The final product of this joint project was the establishment of a common website for all involved entities. You are invited to visit it and be impressed: [www.resourceproject.eu](http://www.resourceproject.eu)

This year we sent a record number of employee delegations, reflecting an updated process and method for selecting delegation participants. In February, we issued a call for the organization’s employees to propose their candidacy. Participants were selected from among the those who expressed interest.

**Delegations We Sent and Received This Year:**

1. A delegation to North Rhine-Westphalia in Germany, in cooperation with the German Tourism Organization. We will continue this partnership in 2023, when a delegation of youth from SPNI will go to a summer camp with members of a German youth organization, and these German youth will later visit Israel.
2. A delegation was sent to Thuringia in Germany to meet with the Friends of Nature organization on environmental education. Following this, we will send a delegation of alumni of SPNI’s service year program to meet with their peers in Germany.
3. A preparatory delegation of SPNI’s teams who work in the Arab sector went sent to prepare the youth for a conference in Germany on the climate crisis, in cooperation with delegations from Morocco and Germany.
4. SPNI sent a delegation of Arab youth to a conference on the climate crisis in Sika, Germany under the auspices of the German Ministry of Foreign Affairs. The Arab youth met with youth from Germany and Morocco. We are promoting a follow-up project in Morocco with representatives from Germany, Poland, Morocco, and Israel.
5. A delegation went to a conference on birdwatching and the climate crisis in Berlin, Germany, together with the Nature and Biodiversity Conservation Union (NABU) and National Association of Youth Organizations (NAJU). Following this, we will send a delegation of young birdwatchers to meet with their peers from the host organizations.
6. We hosted a delegation of employees and volunteers from the German Friends of Nature organization to introduce them to SPNI’s activities, with an emphasis on our service year volunteer program, with the aim of developing joint activities for young people from the two organizations.

**Conferences we participated in:**

1. Germany: a youth conference of the German organization CONACT, with an emphasis on environmental protection.
2. Morocco: a conference for youth from Mediterranean countries.
3. Israel: SPNI conference to prepare for COP27 (the UN Climate Change Conference) with an emphasis on habitats. The conference was sponsored by the Konrad Adenauer Foundation.
4. As part of COP27, the United Nations Climate Change Conference, SPNI offered a side event, together with the Israel Ministry of Environmental Protection. The president of NABU took an active part in the event. (NABU is the largest nature conservation organization in Germany, and SPNI has had a cooperation agreement with them since 2016).
5. A climate crisis conference in Morocco, organized by SPNI and the Jordan Valley Regional Council with funding from Israel’s Ministry for Regional Cooperation, together with environmental and social organizations from Morocco, Jordan, and Turkey. We are preparing for a follow-up project during 2023 in Turkey.

**HOSPITALITY**

We are in constant contact with various embassies in Israel. In this context, we hosted representatives of the US Embassy in Israel, the advisor to the US Secretary of State for environmental affairs, and the representative from the office of John Kerry (the US presidential envoy for climate). We hosted representatives of the Mediterranean Environment Office of the Konrad Adenauer Foundation.

We held cleanup activities in Israel as representatives of the international Let’s Do It World! Cleanup Day, sponsored by companies and organizations in Israel such as Toyota, Project Management Institute (PMI), Salesforce, and more.

**URBAN NATURE**

The Urban Nature Unit focused on promoting local authorities’ involvement in preserving local nature and continued to conduct detailed surveys and planning guidelines for nature areas in cities, and guiding the planning and establishment of urban nature sites. The unit also consolidated guides for cultivating natural infrastructures in various Israeli cities.

Major surveys were submitted this year to the Israel Ministry of Environmental Protection’s call for proposals for their “Around Nature” program. These surveys were conducted in the municipalities of Ramat HaSharon, Kfar Yona, Nesher, Kiryat Yam, Shoham, and Or Yehuda. Surveys are already being carried out in Kiryat Shmona, Atlit, Bat Yam, Holon, the Jordan Valley and Hof HaSharon regional councils, and several Arab local authorities including I’billin, Reineh, and Umm al-Fahm. We also conducted surveys to identify environmental hazards all over the country, also within the framework of the “Around Nature” program funded by the Ministry of Environmental Protection.

Prominent urban nature projects that we supported in 2022 include an excavation in the Tsor’a Valley in Nahal Soreq, a significant natural site that regulates runoff from an agricultural area. The project was conducted for the Mateh Yehuda Regional Council in cooperation with the Drainage Authority and a joint team of the Urbanoff and Uri Moran planning companies. Other projects are taking place in Nahal Yishai in Beit Shemesh, in the Valley of the Cross in Jerusalem, mapping the remnants of the Kurkar Ridges (fossilized dunes) of Tel Aviv, in Tzrifin Park in Rishon LeZion, and more.

We established the Center for Nature-Based Solutions in the City, which offers tours, lectures, and courses for local authority employees in order to develop local leadership for the preservation of urban nature in an era of climate crisis. Representatives of many authorities went on tours to the Gazelle Valley in Jerusalem, which serves as a demonstration site for the planning and management of natural areas in cities.

This year we also established the Wild Animal Rescue in the City department, rescues animals prior to urban renewal and construction projects. Rescued animals are transferred to authorized nature reserves, with the approval and coordination of the Nature and Parks Authority and in cooperation with Noah, The Israeli Federation of Animal Protection Societies.

We continue to work with the general public in collecting information about nature in the city, through the citizen data interface site: <http://tiny.cc/Tevaironi>.

**NATURE DEFENSE FORCES**

With the lifting of restrictions from the Covid-19 pandemic, and given the lack of a national budget, 2002 was a year of action and significant momentum for the project “Nature Defense Forces: Military commanders take responsibility for their environment.”

This project is founded on work with IDF military units and branches across the length and breadth of the country - from the Hermon to Eilat. In the nine years of the project’s existence, it has demonstrated stability, continuity, and an ability to implement activities. Many senior military officers in various roles have taken part in this project throughout its years of activity, and their spirit is evident in their connection and dedication to the project and this direction. There is significant support and cooperation from SPNI’s partners (the Nature and Parks Authority and the Antiquities Authority), which are pillars of the project’s success.

Officials from the IDF Planning Directorate and the Ministry of Defense fully joined the project as professional advisors and partners for planning and implementing its processes. This forum enabled actions that produce projects with small but tangible successes, and learning process regarding the potential for system-wide implementation of initiatives.

Major General Michel Yanko, head of the IDF Technology and Logistics Directorate, has been leading this project for many years. He said that in 2022 the project had achieved its initial goal, as defined by Lt. Col. Eisenkot: “A change of perception - embedding an understanding of this value among the IDF senior command.” Yanko requested that the project partners (including the IDF Planning Directorate) direct their attention to global and local issues arising from climate change and to intensify the project’s activities, with the understanding that nature conservation and nature-based solutions are primary tools for the nation to address climate change.

The project’s multi-year plan was implemented. This plan connects preservation of nature and antiquities with existing systemic processes in the IDF that promote economic and operational efficiency. The project focuses on initiating nature-preservation projects with tangible and measurable results. The project has been fully assimilated into the security system and the partnering entities, and it is now a branch within the system able to carry out cooperative, targeted actions to promote the preservation of nature and antiquities.

This year, 57 military units participated in the project and implementing the plan. In these units, we saw increased activity and attention to the issues that have part of the project to date such as: reducing waste, reducing fires, preserving biological diversity, and protecting antiquities sites. Additionally, new issues were defined in 2022 as part of the project: light pollution, runoff management, increasing tree cover along streets, contiguous corridors along fences, and promenades.

**Issues on which this project worked through the end of 2022:**

**Fire prevention**: There was cooperation between the IDF, the National Fire and Rescue Authority, the Nature and Parks Authority, and other partners to increase fire safety and prevent wildfires. This included mapping areas where fires frequently break out, formulating instructions and procedures defining which types of ammunition are approved for military training exercises during each season of the year, and using prescribed fires as a tool for creating buffer zones. To complete the initiative, the IDF decided that the Security Fence and Border Administration, which is already experienced in operating and supervising contractors regarding vegetation issues, would be responsible for implementing plans to reduce and prevent wildfires resulting from use of training equipment in firing zones. Significant steps were taken to reorganize and streamline operations: fire hydrants were installed along the perimeter fence on Israel’s eastern border, backpack sprayers were procured, and a pilot project explored establishing protective barriers to reduce fires resulting from use of training equipment.

**Waste reduction:** The project addresses waste reduction on four levels: 1) developing a plan to assess waste; 2) developing and implementing mobile waste facilities for open areas; 3) a pilot project for using composting toilets; and 4) reducing use of disposable utensils and switching to reusable utensils.

**Biological diversity:** Activity focused on controlling invasive species, removing metal waste hazards from open areas, rescuing injured animals, releasing rehabilitated animals into the wild, conducting surveys and studies with an emphasis on desert and the Jordan River, and establishing habitats such as winter ponds. There were operations to rescue wild animals in captivity, searching for traps, preventing the theft and smuggling of antiquities, raising awareness of the law among the Palestinian public, joint training, and real-time reporting of unusual events.

**Preserving antiquities:** Archaeological excavation activities were carried out by commanders and soldiers in the firing ranges. Antiquities were cleaned, preserved, and made accessible to the relevant services. Following meetings and information days, IDF officials and the Ministry of Defense worked in close cooperation with the Antiquities Theft Prevention Unit in the apprehension of robbers by Shomron Territorial Brigade trackers, and in anti-smuggling activities by the Ministry of Defense’s Crossing Authority.

Other core issues in the multi-year plan, regarding climate change:

**Light pollution**: Raising awareness among senior commanders by hosting professional stargazing events for commanders.

**Runoff management:** In collaboration with the Botany Department of the Science and Conservation Division at the Nature and Parks Authority, a plan was developed to reduce soil runoff from warehouses and roadsides by seeding local plant species that meet fire prevention standards while also holding the soil. A pilot project has been set up at the Soreq Ammunition and Missile Center, and possibilities for other test cases are being examined.

**Tree planting along streets**: Orchards of local species were planted in the southern region, and hydroponic systems for growing local plant species were established on rooftops and along buildings. There was an effort to assess the reduction in electricity use as a result of shading.

**Contiguous corridors and fence interfaces:** We worked on five areas related to fences: mapping ecological corridors, reducing damage to gazelles from fences, mapping animal crossings and paths in the area of the perimeter fence on the northern border, erecting a fence in the Arava (conducting a footprint-based survey as part of the tracker school training) and keeping animals away from flight paths.

**Promenades:** This field will be developed in 2023 as part of a project led by the training department of the Israeli Ground Forces.

**Budget:** After years of budgetary instability, an agreement was signed at the beginning of 2022 between the Ministry of Defense and SPNI for the Nature Defense Forces project for 2022, with options through 2025, to implement the multi-year plan. This followed approval of the national government budget, which enabled this agreement to be implemented.

For the first time since the launching of this activity, the civilian partners finalized agreements with the Ministry of Defense for joint operation of the program with SPNI, the Nature and Parks Authority, and the Israel Antiquities Authority.

Following approval of the budget, a team was recruited to lead the project, including a project manager, content manager, and regional assistants from the partner agencies involved in the projects.

In preparation for activity in 2023, the steering committee, headed by the IDF Chief Technology and Maintenance Officer, selected six new projects: the Engineering and Construction Corps, the Ramat David base, the Haifa naval base, Training Base 1 (officer school), the IDF Liaison Unit, and the Ground Forces Training Department. These projects constitute the next level in implementing this project’s multi-year plan with the IDF, in which the project is described as a platform for carrying out targeted activities that can be case studies for potential system-wide application, the goals of which related to protecting nature and antiquities as part of the national effort to adapt to climate change.

**OPEN SPACES**

The best way to preserve nature and biodiversity in Israel is to maintain large and contiguous open spaces. This year we continued to work to protect open spaces.

**Statutory Protection of Ecological Corridors.** As a result of our work with planning departments, this issue has been prioritized. Currently, every district is working on a plan for statutory protection of ecological corridors in their region. The Central District committee has completed their discussion of the issue and passed their proposals to the Subcommittee for Fundamental Planning Issues. They are awaiting approval from the subcommittee and the National Planning and Building Council. The Haifa District has completed its work and is awaiting a decision from the subcommittee. The Southern District is nearing the end of its discussion in the District Committee. The Northern District and Jerusalem are in advanced stages of their work on the issue.

**Strategic Plan for Open Spaces.** As a result of our efforts, a strategic plan for open spaces has been proposed to the Planning Administration. This plan promotes a future-oriented vision for nature reserves and parks, protection for streams and the riparian environment, landscape conservation, fostering a culture that includes “dark sky areas” and more. The plan will create a diverse information base and additional, meaningful protection for open spaces that are not adequately protected today.

**Protecting the southern hills in Modi’in.** Our long-term struggle to protect the southern hills in Modi’in has ended in success; this area will become a national park, protecting this ecologically important area and ecological corridor.

**Iris Reserve in Nes-Ziona and Rishon LeZion**. The District Committee for Central Planning and Construction submitted a plan to create an urban recreation area, the Iris National Park between Nes-Ziona and Rishon LeZion. Within a total area of 5,400 dunams, 4,600 dunams will be defined as open space, including Iris Hill, which will be classified as a nature reserve. We promoted land restoration in Iris Hill and the surrounding area, in cooperation with the Rishon LeZion municipality, through the Open Areas Fund.

**Stopping construction plans in Emek HaShalom**. The Yokneam Municipality wants to expand its jurisdiction and in order to expand construction near Emek HaShalom. This area is environmentally sensitive, designated for conservation, and used by many people for leisure and recreation. This application was approved by the committee for municipal boundaries, which recommended transferring the area to the municipality of Yokneam. Given this significant threat to the area, we joined a broad coalition of professionals and members of the public opposing the development. We were able to halt the initiative and other alternatives for developing the city are being explored.

**Stopping the Makhtesh Ramon amphitheater**. The Mitzpe Ramon local council published a tender for constructing an amphitheater in Makhtesh Ramon, a unique site. An international organization has designated it as the only Starlight Reserve in the Middle East; a status conditional on meeting strict criteria regarding light and noise pollution. The Ministry of Environmental Protection and the Nature and Parks Authority were mobilized to oppose this amphitheater. Given this opposition, no entrepreneur responded to the tender for constructing the amphitheater. We are currently working to change this plan to prevent future initiatives of this type.

**Temporary stoppage of the marina plan.** We have been involved in this struggle since the 1990s, and it has intensified in recent years. The Planning Administration is promoting a plan to build six new marinas. This threatens public beaches for the benefit of a few individuals. In a joint struggle with a broad coalition fighting this plan in order to protect public beaches, we succeeded in getting the subcommittee for fundamental planning issues to recommend cancelling five of the marinas, and this recommendation was passed on to the National Planning and Building Council.

**Protecting the Gulf of Eilat and its beaches.** We recently became aware of proposals to develop concrete boardwalks in Eilat that threaten its beaches, coral reef, and the entire marine environment. The planned projects, some of which are already being carried out, are along water line and include concrete constructions with rigid elements anchoring them to the coastal soil. This will cause significant, irreversible degradation and damage to the marine environment and coastal land area. It must be remembered that these beaches are public property and it is our duty to preserve the coastal environment and sandy beaches for the public’s benefit and enjoyment, and for future generations. In a joint struggle, we managed to temporarily halt these projects.

**Halting construction of unnecessary and harmful roads**. We halted a proposal by Netivei Israel and the Ministry of Transportation to expand Highway 9, which would connect Highway 4 and Highway 2, south of Hadera. Last year, we were able to prove that this road is not necessary for transportation, and that its construction will cause severe environmental damage. As a result, it has been halted, and we are working to bring about its complete cancellation.

We were able to cancel a proposal by the Ministry of Transportation to be a public transportation road through the Poleg Swamp. The proposed road would have been a continuation of Highway 20 (the Ayalon Routes) from Shefayim to Netanya, parallel to the coastal railways, and would trample the biologically rich Poleg Swamp in the heart of the Sharon region. After a campaign, in which hundreds of residents and many organizations expressed their opposition, the Committee on National Infrastructures decided to cancel the road.

**The housing sector.** Over the past two years, we continued our struggle against the construction of new residential neighborhoods planned through the Committee for Preferred Housing Sites. In 2020, we led a broad coalition of organizations and individuals that strongly opposed extending this committee’s activity. Although the Committee for Preferred Housing Sites was not disbanded, the Knesset agreed to limit its activities in open areas and to promote urban renewal and densification of cities instead. Since the committee’s activity period was extended, we have regularly followed its proposals and are working to reduce damage to open areas and to preserve surrounding ecological corridors.

**Rekhes Lavan (White Ridge) and the highway level (grade) separation**. We continued our long-standing struggle to protect the Jerusalem hills. After planning procedures for the level (grade) separation road at the Ora intersection were completed, we submitted a court petition against approving the plan for constructing the Western ring road and new neighborhoods in the area. Given the opposition to the White Ridge plan, the Jerusalem municipality began to examine scaling back the plan to a smaller area, to minimize the damage.

**Energy policy**. We continue to be at the forefront of promoting an environmentally friendly solar energy policy, favoring siting solar panels on rooftops rather than in open areas. In this context, we encouraged the National Planning and Building Council to limit the area of land allocated to solar energy, which had made a decision to expand it. Solar energy in urban areas and on rooftops has become the preferred option for most experts and entities dealing with this issue. As a result, in 2021, over half of the solar energy in Israel came from rooftop panels. Recently, they began to promote combining solar energy with agriculture, which can optimize land use, but also may encourage solar panel installations that cover large areas. We are following these processes, to guarantee that nature conservation needs are met.

Last year we opposed plans for additional wind turbines. We were able to reduce the number of turbines in a planned wind turbine farm in the Golan, and the plan has been put on hold. In addition, we are following research on the impacts that wind turbines in the Galilee and the Golan have on birds. We are working to ensure that existing facilities comply with threshold levels for harming birds and bats.

**Protecting the Golan Heights**. Over the past few years, the Golan Heights has faced numerous threats that could alter it beyond recognition, such as wind turbine and solar panel installations covering large areas, power lines, forestry, and construction. In 2022, we worked to limit construction of new wind turbines, and opposed plans for two new settlements in the Golan. We will continue our intensive work to protect the Golan.

**Saving the Ayalon Cave**. As part of their plan to construct a fourth railway track in Ayalon, the Ministry of Transportation is making efforts to reduce flooding from the river in order to protect the infrastructure, residents, and passengers. In this framework, a project was proposed to flood the Nesher Quarry. Several years ago, caves were discovered under the quarry, which contain endemic species. After a long struggle, the flooding project was cancelled last year.