The Climate Crisis is Already Here!

Dealing with the Climate Crisis in Urban Areas

Nature as the front line for addressing environmental and social climate challenges

Background:

Even in cities, nature exists in various ways, giving a special character to the urban environment. Natural areas are cities’ green lungs and places for leisure and recreation. No less importantly, nature in cities provides complex ecosystem services that are essential to people’s daily lives in terms of infrastructure, economy, quality of life, and more. We are already seeing destructive impacts of the climate crisis in cities and towns, which require an immediate response. How will we deal with flooding? With increased heat in urban areas? With various types of pollution (air, light, etc.)? With invasive species?

**Nature can protect the climate!** Nature offers solutions to deal with the effects of the climate crisis through natural infrastructures and functioning ecosystems. Thriving natural systems in urban areas are essential for the wellbeing of humans and the ecosystem, and for maintaining resilience, public health, and safety in cities.

**Unity is strength!** Long-term cooperation between local government and civil society can make a significant contribution to improving the quality of life in the city. It is clear that to address a calamity of the magnitude of the climate crisis, there is an urgent need for solutions at the local level and for collaboration in order to achieve them.

**The Center for Nature-Based Solutions in the City** provides professional and practical solutions for decision-makers and professionals working in Israel’s local authorities, in fields related to mitigating climatic phenomena and strengthening natural systems in urban areas. This includes dealing with flooding and runoff, mitigating heat islands, strengthening biodiversity, promoting gardening with sustainable vegetation, managing urban natural spaces in partnership with the community, setting policies for urban nature, and more. Solutions are offers through a wide range of lectures, demonstrations, and tours.

**Who Are We?**

The Urban Nature Unit of the Society for the Protection of Nature in Israel (SPNI) has been a leader in this field since 2000. We specialize in creating databases for planning and sustainable management in the urban environment, policy making, and offering practical tools for strengthening the resilience of urban nature. This unit works with government ministries and local authorities in developing nature-based solutions to environmental issues, which will have long-term benefits to society and economic sustainability. Our team includes expert urban nature surveyors, ornithologists, and people with experience in planning, education, community work, and policy implementation.

The Center for Nature-Based Solutions in the City grew out of the understanding that, in addition to professional activity that is mainly concerned with conducting urban nature surveys and writing management policies, there is also a need to provide dedicated training to public officials and employees of local authorities and professional entities. Our goals are to give local authorities and professionals the tools to deal with climate challenges in the city and to strengthen and sustain urban ecosystems, for the wellbeing of people and nature.

SPNI and its Urban Nature Unit actively participate in developing and implementing nature-based solutions to address the climate crisis that can be applied in Israel and exported to other countries. We propose sharing our experience and the knowledge we have gained and expanding cooperation beyond Israel’s borders.

**Our Content Areas**

Our center offers professional training, in the form of workshops, lectures, and tours, on a wide variety of topics. The goal is to delve deeply into issues related to planning and managing urban natural systems and to offer the most up-to-date information, tools, and practices from the field. The topics addressed include:

* Between ‘urban nature’ and ‘nature in the city’: review and characterization, ethics, significance, and ecosystem services
* Planning and managing urban nature sites: planning, engineering, treatment of wild animals and invasive species, sustainable gardening, fire-risk reduction
* Interface between the city/locality and adjacent open spaces
* The role of ecological corridors and green infrastructures in cities
* Sustainable urban design and nature-based solutions for issues such as: shading and reduction of urban heat, floods and flooding prevention, epidemics and urban nature, the climate and urban nature, human-nature conflicts in the urban environment
* Tourism and an economy based on natural systems: urban natural areas as tourist sites, guiding urban nature tours
* Nature in education and urban community: integrating urban nature into education as places for learning and activities, involving a wide range of volunteers, coalitions, and processes for public participation

Our lecturers are experts on topics related to nature and ecology, planning, education and community and public participation. They bring with them extensive experience in the field.

**Course Structure and Location**

The subjects of the training and tours are detailed below (see Appendix 1). You choose the relevant topics and we will design the course content and scope for you, according to your needs, composition of the participating population, timeframe, etc.

The course takes place mainly in Jerusalem, at the Nili and David Bird Observatory, in Gazelle Valley, and at several demonstration urban nature sites in and around the city (the list of available tours is given in Appendix 2).

Our target audiences:

* Employees and elected officials in local governments
* Planners and architects
* Educators (in formal and informal educational settings) and community leaders
* Employees of nature conservation organizations
* Volunteers and activists involved in issues related to the climate, environment, and nature conservation

**The Course Provider’s Experience**

The Society for the Protection of Nature (SPNI) is a non-profit public association, established to educate and preserve the values of nature, landscape, environment, and heritage in Israel. It is the oldest and largest environmental organization in Israel, and one of the oldest nature and environment conservation organizations in the world. The Urban Nature Unit’s professional team includes a wide range of experts in the fields of ecology, environmental planning, and geographic information systems (GIS). The Urban Nature Unit has over a decade of experience conducting dozens of detailed surveys for local authorities, formulating policy documents and planning guidelines, giving ecological support for planning, conducting hazard assessment surveys, assisting with managing and establishing urban nature sites throughout Israel, encouraging public participation, and more. Over the last decade, the Center has collaborated on diverse projects with government ministries, local authorities, and the general public. We have the organizational advantage of affiliation with educational and community units of SPNI across the country.

**Appendix 1: Menu of Professional Training Day Programs**

\*These topics can be adapted for transmission to various audiences

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| **General Area** | **Topic** | **Details** |
| Planning/Design | Nature as a stimulus for urban development and renewal | How nature can be integrated into development processes for the built urban environment, at the level of buildings, streets, and neighborhoods |
| Assimilating nature into design systems for urban planning and engineering departments | Translating policy documents into practice, to be used as tools for planning and engineering departments |
| Living Buildings: The Fifth Estate | Following this guide, practical examples from the field will be shown of integrating natural systems into the built environment using living roofs and walls and assimilating traditional technologies from the Mediterranean and desert environment into contemporary construction methods. |
| Planning community urban nature sites | How can nature sites in the city be planned? Examples of planning principles are shown, from Israel and around the world. |
| Municipal policy for urban nature planning and management | How to formulate a municipal policy for cultivating nature in the city, based on the natural infrastructure in the city. An evaluation model for natural urban sites will be demonstrated, with examples from multiple cities in Israel. |
| Between open space and development | How to plan and navigate the border between the city and open spaces. Examples of optimal design and the challenges posed by a non-optimal interface. |
| Nature-based solutions in the city to address the challenges of the climate crisis. | How to adapt urban planning and natural infrastructures to prepare for and address the challenges of the climate crisis. |
| Local ecological corridors and green infrastructures. | Municipalities’ role in the planning, maintenance and management of national and local ecological corridors. |
| Urban waterways | From backyard to front yard - planning for riparian areas and a stream basin approach to managing runoff in urban areas. |
| Wetland habitats and ecological ponds | Planning and development |
| The beach and sea in the city | Protection of the coastal and marine environment in urban areas. |
| Nature in industrial areas | Examples of industrial areas that maintain or establish natural systems and natural areas; nature surveys conducted in industrial areas; inspiration from industrial areas that maintain natural systems around the world. |
| Management, policy and the city-nature interface | Wildlife in the city - protection and management of wild animals in the city | How can we make cities wildlife friendly? |
| Wild animal rescue in the city | Why was the wildlife rescue unit established? Where does it operate in the city? |
| Sustainable gardening and cultivation of natural vegetation systems in the city | Integration of local wild vegetation and nature into various urban infrastructures, upgrading the attractiveness of intensively used parks, refuge gardens, plowing, spraying, living fences, integration of wild animals. |
| Operational aspects of urban nature from a multi-systemic perspective | Integrating a variety of operational aspects in a sustainable urban-nature landscape interface; addressing environmental hazards; preserving the value of nature during construction and development processes; living roofs; integrating nature into educational institutions. |
| Formulating a vision for nature in the city | How to transform nature in the city into a local asset and an aspect of local identity. How to integrate nature into the fabric of urban life. |
| Education and community | Nature in the schoolyard | Bringing nature into schoolyards and educational centers - examples from Israel and around the world. |
| Establishing community urban nature sites | How to establish and/or manage community urban nature sites; how to transform an urban nature site into a community asset; how to collaborate on projects. |
| The wonders of urban nature in Israeli cities | Biodiversity of an area/city of your choice. |
| General | Establishing a butterfly garden in the city | What are the local butterflies? Why are they important? How can we attract butterflies using local vegetation? Which nectar-rich plants and host plants are suitable for urban gardens and home gardens? |
| "Uplifting" urban nature - public relations and being a spokesperson | Practical ideas for increasing public awareness of the importance of community urban nature sites. |
| Digital nature | Using digital tools to develop public awareness of the role of natural systems in the city. This workshop focuses on means and methods for documenting and disseminating information to the local authorities and the general public. |

**Appendix 2 - Tours for professionals in urban nature planning and management**

Goals of the tours:

1. Multidimensional introduction to major urban nature sites in Israel: ecology, planning, ongoing management, education and community, tourism, and more.
2. Inspiration for planning and managing community urban nature sites.

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|  | **Name** | **Content** | **Suggested locations** |
| 1 | Planning and managing urban community nature sites | Gazelle Valley as a model for an urban nature site that is recognized worldwide for its contribution to dealing with the impacts of the climate crisis and as a model of relations between the local authority and the community.  Planning community urban nature sites; urban nature in the built environment.  Key concepts: ecosystem services, nature-based solutions in the city, mitigation and adaptation, community resilience, public participation | Jerusalem: Nili and David Jerusalem Bird Observatory, Gazelle Valley  Optional: Nahal Zimri Park, Valley of the Cross (Emek HaMatzlavim) |
| 2 | Rewilding urban nature | The plant-animal-public (human) interface.  Restoring nature to an urban environment - creating winter pools "out of nothing".  Species spreading in the city, wildlife rescue agency, pet feeding policy.  Key concepts: invasive species, human companion species, spreading species, urban sanitation, ecological transitions, rewilding events | Tel-Aviv-Jaffa (choices): Glilot Eco-park (Drezner Grove, Afeka Caves and Winter Pool), Northwest Coastal Park (Tel Baruch), Rosh Tsipor Park, Independence Garden, Park HaHurshot (Groves Park), Givat Aliya Beach. |
| 3 | Natural infrastructure planning as a stimulus for urban development | Restoring natural urban areas.  Planning and management of community urban nature sites. | South Sharon: Herzliya Park, Kfar Saba Park.  North Sharon: Lake Dora Park and the Netanya Iris Reserve, Hadera Wetland Reserve and the Hadera Iris Reserve |
| 4 | Stream, beach, and sea | Urban streams and wetland habitats, public interface.  Familiarity with natural coastal infrastructures on urban beaches; how to preserve them and integrate them in intensively used beaches.  Key concepts: river basin approach, urban runoff | Haifa, and Tirat HaCarmel  Nahal Saadia, a beach in Haifa, Nahal Galim in Tirat HaCarmel |