Call for proposal "Yad Hanadiv"- Support in rehabilitation of river area

Rehabilitation of the Central Yarqon

Proposed by the Yarqon River Authority (YRA)

Our vision

To create a region, the Central Yarqon, that will be the pride of its surrounding population by strengthening and deepening their involvement in planning, developing and participation in its management.

- Connecting the surrounding population to the river area - Building civil society awareness, knowledge and participation in the Central Yarqon project by forming community groups based on thematic issues of interest that will participate in the project's planning process and implementation as well as the management of the area in the future. This will build and enhance local patriotism and a sense of responsibility towards the area.
- Ecology and environment - Rehabilitate the aquatic and terrestrial ecosystems of the streams and their corridors to a high degree of reliability.
- Hydrology – Planning of water resource management from a trans-boundary watershed perspective, comprised of rainwater and surface runoff management, and flood alleviation in both developed and open areas.
- Joint regional management – Creating a joint management committee comprised of representatives from the public, local authorities and the additional stakeholders.

Description of the project area and main reasoning for its choice

The project area is in the heart of the Yarqon River basin, in the center of the most densely populated area in Israel, home to approx. 1.3 mill. people living in 12 municipalities that surround the area. The municipalities include major cities whose inhabitants are from a variety of sectors, including two Jewish religious municipalities, three from the Arab sector and several from lower socio-economic statuses.

The river and its tributaries flow through open spaces with agricultural activity and yet, its ecological and environmental values are abundant. This section of the Yarqon is less known and is largely used for unregulated leisure and recreation, resulting in conflicts

between visitors themselves and between visitors and the environment. Plans to develop additional housing units to address Israel's growing population may increase the degree of conflict but on the other hand, will increase the value and necessity to protect the area and its open spaces so that this project will provide a much-needed platform of open and accessible quality spaces managed for enhancing its ecological system services and safeguarding social equality. These areas will enhance the quality of life for those living around them and for its visitors. We believe that focusing efforts on this area will create a "ripple effect" of influence, radiating and creating momentum for upgrading additional areas throughout the entire river basin.

The project will also facilitate connections between the surrounding municipalities through the system of paths that run along the tributaries and through the open spaces.

Environmental benefits

- Improving and protecting the ecological system services that the area provides by preventing pollution and increasing species diversity.
- Reinforcing the aquatic and terrestrial ecosystems and the connection between them.
- Creating and maintaining ecological corridors and passageways.
- Reinforcing the function of the river system and flood plains.
- Creating a future vision that reflects the expected growth in population, the pressures on open areas and climate uncertainty.

Social benefits

- Managing visitor safety
    - Minimizing dangers in the open area by developing a continuous open space without interruptions and danger from vehicles, constructing a system of gates and control structures that will prevent private vehicles from entering the area.
    - Installing parking facilities and shaded routes to the river corridor and other attractions.
    - Minimizing the danger of flooding along the river and in the built areas in the surrounding municipalities.
    - Raising the public's awareness in order to prevent pollution and take responsibility over the area.

- Stability and reliability- Instilling a sense of security among the public that this is a valuable area in which the required efforts are taken in order to prevent pollution, in the wide sense.
- Sustainable economy- Creating leisure and recreation sites which are open without cost to the general public. Developing the area will encourage entrepreneurs who are interested in forming projects in the area.
- Local pride and inspiration- The educational processes and physical development will encourage the general public to be locally active and take responsibility. This plan will set an example for management of open areas crossing municipal borders, with the goal of creating an effect on the local level, the regional level and the national level.

1. **Social and community development**
   - Community – The project is designed to promote awareness and create a sense of local patriotism by developing and leading thematic courses for the surrounding communities. The YRA's 'sustainability coordinators forum' will work within all the surrounding municipalities.
   - Education- Creating long term processes, such as: the "River Guardians" program at schools and training education personnel in various educational institutions including formal and informal ones, environmental organizations, field training classes and "Green Horizons" youth movement.
   - Connecting disadvantaged communities - Developing the river's expanse and creating accessible infrastructure adapted towards all the surrounding communities.
   - Public involvement, information and access to information – The social and community team will work with the public to develop a suitable and transparent tool for facilitating information availability and transfer across all the surrounding population, including real-time updates for various events and issues of interest. Materials will be developed in different languages and will be adapted to the different target audiences.

2. **Creating a high quality recreational and leisure area**

   The planned system will open the area to the public and make it accessible to hikers, cyclists and other social activities using a network of safe paths.

- Build a network of walking and cycling paths from each of the communities surrounding the project area, including access to those with limited mobility.
- Visitor safety - Creating a demarcation system and limiting the entrance of vehicles into the natural area in order to protect the natural system and the safety and enjoyment of visitors.
- Build parking lots - Allowing the public arriving by car to easily access key attractions and sites near the river, including people with disabilities.
- Build rest areas for recreation and leisure around the eco-hydrologic holding basins, in natural and archeological points of interest.

3. **Hydrology and surface runoff management**

   The basis of the plan is a watershed perspective, from the national water divide to the sea.

   - Flood plains – Enhancing the flood plains functionality by creating a hydro-ecological holding basin, based on plans commissioned by the Drainage Authority, and improving the drainage ability of the developed area within the river area.
   - Water conservation policy - Promoting the implementation of water conservation practices in the built area, in newly planned areas and in the open spaces.
   - Modeling - Forming a rain/surface runoff model and a hydraulic model to be used by planners and local authorities in order to streamline planning processes and to create a knowledge base for decision making.
   - Monitoring - Building a monitoring and alert system for winter discharge occurrences, with possibilities for public viewing.

4. **Protecting the river's water quality and preventing pollution**

   Based on recommendations of a previous report " A basin-wide Toolbox for Preventing and Minimizing Contamination of the Yarqon River" to create a control center:

   - Point source pollution prevention – Monitoring and operational means of response to pollution events (combined with the winter flow and flood monitoring system).
   - Preventing non-point sources pollution - Creating filter strips along the riverbeds and establishing cooperation with the farmers/cultivators.
   - Water allocations - Anchoring water allocations and increasing them.
   - Improving the quality of water in the river - Building a fourth constructed wetland as part of a long-term vision.

- Waste water treatment plants - Setting demands for wwtp for preventing stream and environmental pollution measures and practices and assisting in the implementation and installation.
- Solutions for solid waste - Creating reliable solutions to stop the problem of waste disposal along the riverbeds by working together with local authorities and thematic civil society groups.

5. **Ecology**

   Preserving and improving the system services that the streams and the terrestrial ecosystem provide.

   - Aquatic habitats - Increasing the structural complexity.
   - Terrestrial habitats - Creating diverse habitats and implementing forestry management to reinforce ecological corridors and create shaded sequences.
   - Improving species diversity - Building fish ladders for stream connectivity and reintroducing species.

6. **Innovation**

   Facilitating active public involvement in the myriad Yarqon issues and opportunities is a major project and its success will set a new standard for joint management of multi-municipality public assets. The proposed area's borders are hydrological in nature, as opposed to administrative .While one aim of the project is to promote equality, in the world of rivers and hydrology where there are up-stream vs. down-stream issues, equality isn't always possible and can only be achieved with a lot of explaining and a strong knowledge base of all involved parties.

   The YRA's proposed project aims to create this base and to bridge the gaps to ensure the project's success.

7. **Managing the area**

   The YRA is perceived as a regional organization that brings together different parties in order to deal and solve issues at hand. These issues include planning and execution of projects across municipalities and other parties, most of which are members of the YRA.

   - Forming a managing committee - An essential element comprised of municipalities, the public thematic groups and stake holders. The members will choose the leaders of the committee.

- Education and information – The managing committee will decide on the process to initiate this activity, based on the existing ‘sustainability coordinators forum’.
- The hydrological committee - The YRA together with the Drainage Authority will act to form the hydrological committee.

Initial estimated appraisal for the project's budget

The project's budget is 63 mill. NIS for planning and execution of all its elements, not including routine upkeep.

The YRA will operate and maintain the project's components after they are carried out, using the Authority's budget and with funding from additional partners.

Existing and potential partners for funding:

1. **The ILA Fund for the Protection of Open Spaces -** The fund has funded the planning stage of the "Continuous Green Yarqon" plan, which created a practical planning framework for a larger area of the river and its surroundings. As the project matched so closely with the fund's goals, as well as the ongoing success in implementing its budgets in the Yarqon over years, we trust and believe that moving forward, when specified plans will be ready and approved for execution, the fund will continue to assist in implementing the project in stages.
2. **The Ministry of Agriculture -** The ministry funds actions related to drainage for projects aiming to create regulation and for flood water retention and percolation.
3. **The Drainage Authority-** The Drainage Authority implements projects as a regular activity.
4. **Municipal Authorities-** The municipal authorities execute actions related to drainage, creating infrastructure and landscape development on a regular basis, and this current project will encourage their joining for mutual funding.
5. **Donations-** As far as we are able to attain.
6. **Financial organizations-** There is an initiative to examine the idea of creating financial organizations/mechanisms in order to fund public/green projects. If the initiative succeeds, we will be able to apply for assistance.

The Yarqon River Authority

The YRA, formed in 1990, has been busy fulfilling its purpose as defined in the founding decree - to rehabilitate the river and render it suitable for recreation and leisure activity. The YRA has implemented many diverse projects, achieving many improvements and is involved in various policy issues related to rehabilitation of rivers and basin management.

If chosen, the YRA will lead the project from the onset of the planning process through its implementation and operation together with the civil society groups established throughout the project and with additional partners.

The following are some examples of the YRA's work:

1. Ecology and environment - Implementation of the government decision for rehabilitating the Yarqon (2003), rehabilitating riverbeds, "re-meandering" the river channel, rehabilitating habitats, increasing structural complexity, re-introducing species (animal and plant life), preventing pollution, planting trees and more.
2. Hydrology - Issues of policy of managing water resources on the basin level; water allocations for the river - water sources and qualities; monitoring water quality; drainage operations and minimizing risk of flooding and more.
3. Infrastructure - building constructed wetlands, monitoring infrastructural initiatives' planning processes and construction. Creation and continuous upkeep of Walk and Bike Trails along the riverbanks.
4. Planning - River master plan, watershed master plan, statutory regional plans and more.
5. Community and society - Leisure and recreation, managing a non-comital forum of coordinators from all regional authorities, creating courses for the communities, accompanying interest groups.
6. Research - the Authority initiates and is involves in various studies.

Road map

The YRA has already created the statutory basis for implementing the project's physical components. This is a very important factor with respect to the ability to implement several of the project's key components.

The following are selected scheduled activities. All social type activities are continuous across the whole period, as are many components that will accompany ongoing planning processes.

- Schedule:

Year 1	Year 2	Year 3	Years 3-5
- Detailed planning - Form regional management Committee - social processes (partial list): - initiate soc. & comm. Team activity. - Formation of thematic groups - Initiate planning processes w/public participation - Connect formal & informal edu. parties	- Attaining permits for physical components - Begin implementation of community projects (thematic groups) - water related components - ecology & solid waste issues	- Implementing physical components - Community projects - Field trips - Link academic research groups to schools and individual research projects	- Implementing and completing the project - Continued thematic group and community activity – system monitoring - Project summation and definition of the next step

The planning team

- The GM of the YRA will lead the project in its entirety. The YRA employees will lead their respective tasks.
- Social and community aspects – The YRA will form a professional team to implement the social and community components of the project. The team will include a manager and coaches that will be assigned to the municipalities.
- The head of the planning team: Architect Erez Lotan- has dealt intensively for the past 15 years in planning and rehabilitating open areas, river expanses and aquatic habitats on a large scale in the Yarqon River, Hod Hasharon Park,

Yeruham Lake Park, Be'er Sheva River, Shikma and Besor Rivers, Sorek River, Ariel Sharon Park and Ayalon River and more.

- Hydrology and drainage engineering - Lavi Natif Engineers
- Ecology - Eldad Elron
- Landscape architecture - Tal Lotan
- Water quality infrastructure, monitoring & control systems - Triple T Company
- Additional advisors: safety, electricity, structural integrity, soil stability, economics