**Interim Report to Summarize the First Year of Work on the SUN Project**

Written by Dan Alon, Yoav Pearlman, Nadav Yisraeli and Assaf Zanzuri

**General Background**

Just over a year ago, we launched the SUN Project. The Project has two principal components:

1. The construction and management of two sites being established on fish ponds the agricultural function of which has ended:

At Kfar Ruppin next to the Jordan River and at Ma’agan Michael next to the Mediterranean shore beside Nahal HaTaninim, one of the most important rivers in the coastal plain of Israel.

1. The mapping, and later the construction and management of a broader network of sites to be built over fish ponds being removed from service in various regions in northern Israel.

In this report we will provide details of the results of the Project at the end of the first year.

**1. Construction of the sites at Kfar Ruppin and Ma’agan Michael**

**A. Kfar Ruppin**

At Kfar Ruppin, the construction work financed by the Israeli government has concluded at a total investment of NIS 6 million (about $ 1.8 million). The partnership with Kibbutz Kfar Ruppin is very good and has already led to significant achievements in the field and has permitted a significant increase in the area.

The Project at Kfar Ruppin presently includes two components.

Component A - the ornithological park located north of the kibbutz was constructed on the foundation of old fish ponds which have not been used for several decades. The total area of the park is about fifty dunams. The rehabilitation of the park and the construction of infrastructures for visits by the public concluded at the end of 2021, and at present, the park is at the running-in stages. The rehabilitation process lasted for about two years. The natural infrastructures are already functioning, including abundant bodies of water which rely on water from a natural source (Nahal Avuka) and the plant systems are thriving. The wildlife is responding well to the good condition of the natural infrastructures. An abundance of birds can be seen in the area of the park, mainly waterfowl and thicket birds. The high-quality plant systems attract a large variety of butterflies and dragonflies. On the foundation of the natural infrastructures, modern infrastructures for receiving the public have been built, including a system of observation blinds and accessible hiking trails, as well as a convenient parking lot. At this time (the beginning of September 2022), signs have been set up across the site which include rich content which ensures a successful visiting experience.

Component B - the Amud Reservoir, located east of the kibbutz next to the Jordan River. This large reservoir, with an area of 200 dunams, was used for years for fish farming, and in recent years for growing wheat. Since 2020, the Society for the Protection of Nature in Israel has been responsible for the interface of the reservoir area. The reservoir receives its water from the natural waters of Nahal Avuka and natural runoff water. Since the Society for the Protection of Nature in Israel is responsible for the reservoir and it has undergone a feralization process, particularly rich and extremely important natural infrastructures have developed. In the reservoir area, a huge reed thicket has developed, the largest one in the region. The reed thicket, together with bodies of water and other plant life, including trees and other water plants, have created a varied natural system which includes a large variety of micro-habitats. The water level in the reservoir behaves in a manner similar to large natural habitats, with an annual range of levels. The combination of a wide area with a variety of micro-habitats and an annual range of environmental conditions creates excellent conditions for the establishment of a rich biodiversity. The response of the birds to the feralization of the habitat was quite rapid. Within a few months, during the first nesting season, a nesting colony including several species of herons, already developed, including the rare scarlet heron. Sensitive singing birds, such as the nightingale, the Jordan sparrow and the African harrier have been breeding in the reservoir area in good numbers. On the sand walls around it breed the common tern and the common bee-eater, two beautiful and endangered species of birds. During the winter season, when the water level is high, extremely large numbers of ducks and migratory and wintering waterfowl use the reservoir, including ferruginous ducks, which are endangered globally as well as in Israel. Continuous monitoring of the birds and mammals in the area of the Amud Reservoir makes it possible to examine the impact of the various interface operations being carried out there on the biodiversity.

The cooperation which has developed with Kibbutz Kfar Ruppin has permitted a significant expansion of the areas of the fish ponds and other areas with a potential to undergo a feralization process. Contacts are taking place with other partners, including the Nature and Parks Authority and the South Jordan Drainage Authority in order to transfer a significant portion of the fish ponds of Kfar Ruppin where fish farming has ended to the feralization process. In addition, agricultural floodplains next to the Jordanian border also have the potential of undergoing feralization, and there as well we see buds of cross-border cooperation with Jordanian partners for establishing projects on both sides of the Jordan adjacent to the Kfar Ruppin Project.

**B. Ma’agan Michael**

The Ma’agan Michael Ornithological Park is located south of Kibbutz Ma’agan Michael and is built over some of the area of the kibbutz fish ponds which are not being used for the farming of edible fish. The Ma’agan Michael Ornithological Park lies on an extremely important and crowded bird migration route on an international scale. At present, the park area includes 4 ponds: two large ponds which constitute the heart of the park and two small ponds used mainly for research. The park also includes the embankments and the paths between them. In addition, an entrance hall which includes an advanced information and training system is being established at the Hof HaCarmel Field School, which is a logistical hub for the entire park. The total area of the park is about 130 dunams. The ornithological park is being built in partnership with Kibbutz Ma’agan Michael, while the Nature and Parks Authority and the Carmel Coast Regional Council are supporting the Project with a broader view to preservation and restoration processes in the region.

The ecological rehabilitation work and the construction of visitor infrastructures are currently underway and are expected to be completed at the end of 2022. The complete financing of the rehabilitation work and the construction of the tourist infrastructures is being covered by the Israeli government with a total budget of NIS 7.5 million (about $ 2.25 million). As stated, the work includes the rehabilitation of the natural system in the park as well as the infrastructures for receiving the public. Smart hydro-ecological planning has created a variety of micro-habitats in the areas of the ponds that are undergoing a feralization process, which support a wide range of birds. Around the pools, a network of accessible hiking paths has been built, as well as detailed guidance and direction signage, observation blinds and field training positions. These infrastructures provide the finest experience of nature to various types of groups visiting the park. The connection with the Hof HaCarmel Field School, where the public is received, by way of an initial introduction to the park at the entrance hall and a connection to the pedestrian paths into the park, allow the regulation of visitor pressure on the park, in order to ensure that its biological and climatic functioning are maintained.

As mentioned above, the work is expected to be completed at the end of 2022. Then the conception stage of the park will begin; it will be completed during Succot 2023 (October 2023).

Due to the great importance of the fish ponds at Hof HaCarmel to birds, particularly migratory ones, there is already a rich and dynamic bird population in the park. The monitoring which began accompanying the construction processes of the park even before the start of the work has permitted an examination of the effectiveness of the work and subsequently of the interface operations, in order to maintain a rich, high-quality and diverse natural system in the park as far as possible. Already during the work in the park area to create diverse wetland habitats, it is possible to see the attractiveness of the mud flats and the shallow water for a wide variety of long-range migrating shore-birds such as the warbler and the small tern. The monitoring is being carried out by members of the Ornithology Center of the Society for the Protection of Nature in Israel.

Cooperation with Kibbutz Ma’agan Michael. Even before the work began, a detailed cooperation agreement was signed with the kibbutz that allows both extensive rehabilitation and development work as well as full and effective management of the park after construction is completed. In addition, collaborations were agreed upon with other players in the region such as the Hof HaCarmel Regional Council, in whose territory the kibbutz is located, and the Nature and Parks Authority, which is responsible for the preservation of the values of nature in Israel. These collaborations are necessary for the existence of the ornithological park, as well as for the expansion of the areas of the ponds undergoing a feralization process. The potential in Hof HaCarmel is very high, with the possibility of creating a continuous and significant space there that leans towards conservation and rehabilitation. Recently we have been conducting negotiations with the kibbutz on the doubling of the area of the park. If the negotiations bear fruit, in the near future two large nearby ponds will be added to the area of the park [the sentence is incomplete in Hebrew]

**2. Promoting the Great Vision (Stage 2) of the Project**

The State of Israel is characterized by an acute shortage of land due to limitations of area, a continuous growth of the population and mainly a wasteful development culture. The natural areas in Israel are limited, segmented and under constant threat by development pressures. At present, in an era of climate change, we must go from defense to offense in preserving nature in Israel. In other words, strengthening biodiversity by increasing the degree of representation of the ecological units in protected areas (diverse habitats - tussocks, grasslands, scrubs, wetland habitats, deserts, etc.). And this is beyond the 17% rate set in the Aichi Biodiversity Targets to a 30% representation for habitats in protected areas. In order for us to reach this goal, we must work actively. The United Nations has declared the coming decade starting in 2021 as the “Decade on Ecosystem Restoration.” In Israel, a preliminary analysis shows that in some of the ecosystems which are not currently represented sufficiently in the protected areas, there is almost no natural area left, and therefore their preservation requires the restoration of areas that are currently under land uses that significantly reduce their function as a habitat.

To this end, we have established a team of experts from within the Society for the Protection of Nature in Israel together with external experts to create an action plan that includes mapping the restoration potential of the habitats while composing a document on the formulation of a policy to promote habitat restoration in Israel. The work is being done in collaboration with the Ministry of Environmental Protection and the Nature and Parks Authority. The results of the work will serve us in setting priorities for promoting habitats for restoration, and in the first stage wetland habitats with an emphasis on fish ponds located in important areas for restoration regarding which there is a good chance that they will not continue to function as fish ponds in the future. The experts we hired for this purpose are also mapping the ponds and areas that will require minimum maintenance in the future. Mainly, we are mapping all the fish ponds which can be supplied with water from flowing streams without the need for pumps. In addition, based on the data, we will create a proposal for a policy and methods of implementation under the regulatory, planning, legal and land conditions in Israel.

After several meetings with the Israel Land Authority, which is responsible for the Open Spaces Protection Fund, the fund will dedicate the first NIS 20 million in 2023, all of which will be devoted to the restoration of wetland habitats. We also agreed with the authority that in the coming years, similar and even larger sums will be allocated on the basis of our ability and that of our partners to locate suitable areas.

Through a multidisciplinary team of ecological and hydrological planners, we have begun preparing a joint plan with the Emek Hamaayanot Regional Council, owners of fish ponds in the area (kibbutzim), the Nature and Parks Authority, and the South Jordan Drainage Authority to mark 3000 dunams for restoration in Emek Hamaayanot.

The plan will be promoted as a statutory plan in the national planning institutions. This is a huge breakthrough which will allow us for the first time to anchor areas in agricultural regions for rehabilitation. The immediate significance is that these areas will be protected even if there is no immediate budget for their rehabilitation, and in addition it will be possible to raise large amounts of government money on the basis of the plan for the purpose of the rehabilitation.

1. At Hof HaCarmel north of the Project established at Ma’agan Michael on an area of about 2000 dunams, which borders on the Nahal Dalia Nature Preserve, together with the Hof HaCarmel Regional Council, the Nature and Parks Authority and Kibbutz Ma’ayan Zvi, we have begun the process of defining the whole area for the purpose of rehabilitation.
2. Addition and correction of landscape complexes to a national outline plan. In cooperation with the Nature and Parks Authority, we are promoting national work that will examine the accuracy and addition of landscape complexes while adapting to the needs of maintaining the goals of the complex and its character while increasing the protection of the habitats, in order to increase the areas where restoration can be planned in the future.
3. Restoring water to streams and wetland habitats - the Society for the Protection of Nature, together with the Ministry of Energy, is promoting a government bill for a plan to rehabilitate the natural water discharge basins in streams and wetland habitats.
4. Ahead of COP27, in collaboration with the Konrad Adenauer Foundation, a conference will be held that will deal with the vision of the Project and map the problems that must be solved in order to move forward with the Project.
5. Promotion of interregional rehabilitation - the Society for the Protection of Nature helped promote a government bill regarding the rehabilitation of the southern Jordan River and the establishment of a network of wetland habitats along the Jordan. At the same time, we are promoting a cross-border rehabilitation project with the Jordanians on both sides of the Jordan River adjacent to the existing project in Kfar Ruppin.
6. We have begun working in cooperation with the Tara Company. Tara is engaged in carbon trading in the voluntary market. In the carbon sequestration measurement conducted in the project in Kfar Ruppin, it became clear that the project sequesters carbon in large volumes. This finding has two important meanings:
7. The possibility of receiving long-term financing for projects by way of voluntary carbon trading.
8. Giving a new validity to the necessity of these projects at the level of the State of Israel not only for the purpose of the rehabilitation of nature, but also in the equation of carbon emission and sequestration.

**3. Raising the Money for the Project**

So far, we have dealt mainly with raising money for the first stage, the development stage. The goal defined for this stage is $ 1.2 million. Up to this time, we have raised about 70 percent of the amount, and we hope to reach about 90 percent by the end of 2022. At the same time, we have begun to receive the first large donation to the yielding fund of one million dollars. Here too we hope to increase this up to the end of the year, perhaps even doubling this amount. Our goal is to raise the entire amount by the end of 2024.

Summary

In the construction of the sites, their development and operation, we are progressing precisely according to the pace we set in advance, so that by the end of this year we will complete the construction of the two sites.

We had not anticipated that at this stage we could already expand the existing projects, but we are very pleased that there has been great progress in this area, and we will not give up the opportunities which have arisen.

We are even more astonished by the manner in which the decision-makers and national and regional players have joined the vision and are already becoming involved in the promotion of the grand vision. We had not anticipated that at this stage, we would begin promoting statutory, operative plans for implementation in the short and long term.