CEPF Final Completion and Impact Report

Organization's Legal Name:	Istituto Oikos Onlus
Project Title:	Lebanese Biosphere Reserves Joint Initiative to Revive Traditional Agricultural Practices
Grant Number:	CEPF-111666
Hotspot:	Mediterranean Basin II
Strategic Direction:	3 Promote the maintenance of traditional land-use practices necessary for the conservation of Mediterranean biodiversity in priority corridors of high cultural and biodiversity value
Grant Amount:	$150,424.72
Project Dates:	May 01, 2021 - August 31, 2022
Date of Report:	November 09, 2022

IMPLEMENTATION PARTNERS

The project was born with the aim of bringing together two biosphere reserves in Lebanon in order to exchange good practices useful for the conservation of biodiversity and local native species.
From the beginning, both ACS and APJM staff took part in the definition of a work plan and despite the delays in implementation they both managed to achieve the expected results, sometimes even exceeding expectations.
At times when it was not possible to physically meet due to the restrictions posed by the Covid 19 pandemic, the meetings were held regularly online at the request of the two sub grantees.
The exchanges during the biodiversity monitoring activities were fruitful, accompanied by Oikos, an international expert in biodiversity monitoring (plants, birds, reptiles and insects) and a local botanist from a local University (Univ. Saint Joseph).
Both have independently carried out the restoration activities of the terraces and the various training offered involving the local communities.
With regard to the accounting and financial aspects of the project, they have made available a member of their administrative staff to have a constant control of the expenses.

CONSERVATION IMPACTS

Planned Long-Term Impacts: 3+ years (as stated in the approved proposal)

Impact Description	Impact Summary
2. Relative abundance of the species dependent on traditional practices is improved	Even if evaluating the relative abundance of species dependent on agriculture practices requires a longer

Impact Description	Impact Summary
at site level (difference between the Simpson's biodiversity index of restored terraces and intensive agricultural sites of at least 15%). Between May-July and September-November 2021, monitoring of biodiversity in the restored sites and in intensive agricultural sites and abandoned terraces for comparison. The data will be also compared with previous databases collected in 2019 and 2020. List of species see "Project approach, p. 8.	period of time to let them reoccupy their territory after a restoration, this project is a good continuation of what was done in the Shouf Bios. Reserve (SBR) in the previous 3 years. It's possible to confirm that the lands restoration lead over time to favor a stable presence of biodiversity at the plants level and composed mostly of native species as their habitat is maintained thanks to sustainable practices. In the SBR 110 species were observed, 49 in Abandoned terraces (AB), 56 in Intensive agriculture terraces (IN) and 55 in Restored terraces with Low agricultural practices (RL). In IN sites 4 species are invasive and 2 are stress-tolerant typical of disturbed terrains. Unusually a species diversity increase may in fact reveal an increased disturbance to intensively-managed lands with respect to 2022. On the contrary their absence in restored lands may hint at appropriate practices applied to that sites. New 19 species were also observed. The capacity of Jabal Moussa Bios. Reserve (JMBR) to identify plants didn't allow for a full application of the methodology but in the training activities 25 species were identified.
7. 2 nurseries (1 in SBR and 1 in JMBR) supported in the production of native fruit tree varieties and aromatic plants in order to reduce the pressure on the collection of wild species in their natural habitats.	One nursery fully equipped of an irrigation system was build in Maasser el Shouf close to the main offices of the SBR for the production of native species to be used during the project but also for the ongoing promotion of these species in order to diversify the typical monoculture of the conventional agriculture of the area. This nursery will be used by ACS to propagate native species and forest plants thus they will not depend anymore by local nurseries usually selling seedlings of poor quality or not guaranteed. At the same time it will give the opportunity to constantly produce any kind of seedlings and distribute them to the Cooperatives of farmers of the area in order to always support them by having the chance to get good local seedlings at a fair price. During the late months of the Spring and the beginning of summer 2022 the nursery was also used to grow vegetables seedling later distributed to farmers of the area thus supporting them during the harsh economic situation that the country is facing. As well in the Yachchouch center of JMBR, a seed storage room was re-designed by purchasing new equipment: APJM and the communities of Jabal Moussa can now count in a small but functional

Impact Description	Impact Summary
	center for the conservation and cultivation of seeds of local species.
8. Guidelines for a sustainable conservation and use of the selected wild species dependent on traditional and biodiversity-friendly land use practices developed and tested	Guidelines for a sustainable conservation and use of native species were produced in April 2022. These are based on Agro-ecology, a tool that integrates native flora with agricultural practices, encourages crop diversity, makes use of natural biomass, and uses old traditional knowledge to solve common agriculture problems. The aim of the guidelines is to drive and encourage people living within the same habitat to protect biodiversity now and in the future. Many aspects are included such as plant biomass, composting natural and agricultural wastes, use of native trees in windbreaks, as shading objects, as micro-habitat for native insects and wildlife nectar and pollen forage for bees, as aromatic camouflage against herbivore insects and even providing diverse root biomass that contributes to the diversity of micro-organisms in the top soil. Many local species are mentioned and are divided into: native trees used in agroforestry, native shrubs and herbaceous plants, aromatic plants, honeybee plants (for the full list see Annex 28). These guidelines have been also used during the training on traditional restoration techniques of old abandoned terraces, soilconservation and sustainable farming techniques for 120 farmers, and 30 unemployed young people in the SBR and JMBR.
9. Integration of the developed guidelines and best practices for a sustainable conservation and use of wild species in the new SBR management plan and development of recommendations for their integration in the revised management plan and strategies of JMBR.	The aforementioned guidelines have been included in the Management Plan 2018-2022 of the Shouf Biosphere Reserve and they will also be used as a base to start the development of the future management plan of the Jabal Moussa Biosphere Reserve.

Planned Short-Term Impacts: 1 to 3 years (as stated in the approved proposal)

Impact Description	Impact Summary
1. Collaboration and exchange of biodiversity conservation best practices between the 2 Lebanese Biosphere Reserves launched and consolidated.	The collaboration between the 2 Biosphere Reserves in Lebanon started during the writing process of this project and continued for all the period of implementation. A Memorandum of Understanding was signed by the two Reserves to advance in a common vision also after the present project (Annex 27). Together and with Istituto Oikos, participated in the design of a new proposal to replicate the activities started with the CEPF project: the project has been selected by the Italian Agency for Development

Impact Description	Impact Summary
	Cooperation and it will start in November 2022 for a period of 3 years. This new project of almost 2 mln Euro will amplify the efforts done during this experience and it will involve also a new Lebanese Protected Area in the Mount Hermon in order to disseminate the good practices and lessons learnt.
3. 15 hectares of old abandoned agricultural terraces and their dry stone walls restored between May and December 2021 and better production practices, favourable to biodiversity, are adopted on at least 15 ha of farm land and their micro-habitats are preserved.	The team of the 2 Reserves were able to restore a total of 15.15 ha of abandoned agricultural terraces. In particular, 10.15 were restored in the SBR and 5 ha in the JMBR. All the involved farmers after having received the training in agro ecology and agroforestry started to apply the sustainable practices in their lands where also the donated seedlings of the native species have been planted. Although the extension of the restored area is very small, these new terraces put into production again with a particular eye to the promotion of a model of sustainable agriculture and attentive to the conservation of biodiversity, have already aroused curiosity from other farmers who have sent the application to ACS and APJM for a future contribution in the restoration of their lands.
4. 20 farmers have demonstrated economic well-being by an increase of 20% by opening new niche-market channels opportunities (baseline data to be collected at beginning of the project;	As mentioned in the "Unexpected impact section", this indicator was not easy to be collected since the hard economic situation that the country and its population is living. The continuous fluctuation in the exchange rate of the official currency created a hyper-inflation and all prices of all goods have skyrocketed (1.700 % since 2020). This had a huge influence in the opportunities for the people on selling their products as well as a decrease on their purchasing power. By the way, the project gave the chance to the farmers (35 men and 17 women) and the women (62) transforming the rural products to sell them into new farmers' market opened in the 2 reserves thus giving a better opportunity and a chance to have a small family income.
5. 60 women, 120 men and 30 young people will have taken part in the capacity development activities (training on the importance of threatened species dependent on traditional practices, dry stone walls restoration techniques, sustainable agricultural programme, nursery propagation of native species).	All the provided trainings received an unexpected participation of the local communities and the 2 Reserves were able to involve a total of 153 women, 169 men and 35 young unemployed people. In particular in the JMBR the participation was high at the training on Agroforestry and in the SBR the most attended training was on the restoration techniques for the agricultural terraces.
6. Staff of two (2) transformation units for local food products took part in capacity building workshops, 1 in SBR and 1 in JMBR, to improve their skills thus their products with the aim of eventually meeting the targets of high quality standards.	A total of 42 women working in the transformation unit of Jbaa in the SBR and 22 women of the Yachouch rural products center participated in a training related to the transformation of products coming from the native species typical of the 2 reserves, hygiene principles and HACCP (see Annex

Impact Description	Impact Summary
	24 and Annex 25). Different recipes (Annex 24 and Annex 26) with the 2 local expert on Agrofood were developed and the women proceeded with their production. The results were exposed and sold during the promotional events in the 2 reserves and in the farmers market.

Unexpected impacts (positive or negative)?

A positive unexpected impact was the high participation of the local communities at the trainings provided by the two Reserves but also the high number of applications received for the restoration of the old abandoned terraces.

Due to the hard economic situation, agricultural became again one of the few way of subsistence for many families thus the need of technical assistance by these new farmers.

Unfortunately, due to the delays accumulated at the beginning of the project and also during the winter season (mountain villages covered by snow for more than 2 months) the biodiversity monitoring didn't start at the right time. In any case to show the evidence of an impact on the biodiversity due to the restoration of the terraces, it's not feasible in 1 year only. Usually it is a process that needs a minimum of 2 years from the end of the works.

Despite all delays accumulated from the beginning of the project the team of the 2 Reserves where able to achieve the result by restoring a total of 15.15 ha of agricultural terraces. In particular 10.15 were restored in the SBR and 5 ha in the JMBR. All the involved farmers after having received the training in agroecology and agroforestry started to apply the sustainable practices in their lands where also the donated seedlings of the native species have been planted.

This was possible thanks to the previous experience of Oikos and ACS in the restoration of the old terraces and the confidence expressed by farmers towards the project team.

The indicator nr. 4. "20 farmers have demonstrated economic well-being by an increase of 20% by opening new niche-market channels opportunities (baseline data to be collected at beginning of the project" was not easy to be collected since the hard economic situation that the country and its population is living. The continuos fluctuation in the exchange rate of the official currency created a hyper-inflation and all prices of all goods have skyrocketed (1.700% since 2020). This had a huge influence in the opportunities for the people on selling their products as well as a decrease on their purchasing power.

PROJECT RESULTS/DELIVERABLES

Overall results of the project:

With the guidance of Oikos which had already experience on FLR (Forest landscape restoration) and biodiversity monitoring in Lebanon, both staff of ACS and APJM were able to reach the expected results.

In particular:

1. An active exchange between the two reserves was put in place confirmed by the signing of a MoU in which they share a common vision for the conservation of biodiversity also after the present project. The collaboration led the 2 Reserves to write a new project proposal together.
2. Staff members (6 in total) and 14 farmers from both reserves were trained on biodiversity monitoring methodologies adapted to the specific context and target species of the proposal. The monitoring activities confirmed the contribution of the restoration of abandoned land and the application of sustainable agricultural practices in promoting the conservation of the present biodiversity. For the JMBR a first approach to monitoring has begun and will be applied in the coming seasons.

3. 15.15 hectares of old abandoned terraces have been restored and put into production with local native species actively involving 29 farmers who signed conservation agreements in order to guarantee their commitment to maintain their lands according to the traditional eco-friendly practices beyond the project lifetime and beyond.
4. 2 farmers' markets, one in each reserve, were strengthened by the installation of information panels, Addition of new stands and replacement of the more worn ones as well as through the promotion made by the two reserves during the awareness events on the importance of the sustainable use of local varieties. The two markets represent in this difficult socio-economic period that the country is experiencing, a support to farmers and groups of women in having a place where they can market their local products
5. A total of 153 women, 169 men and 35 young unemployed people were involved in the trainings provided by the 2 Reserves on restoration techniques for the agricultural terraces and agroforestry and a total of 64 women participated in the training related to the transformation of rural products, hygiene principles and HACCP, thus increasing the knowledge of the local communities in conserving their territory, biodiversity and resources.
6. One nursery fully equipped was built in the SBR for the production of native species to be used during the project that will be used by ACS to propagate native species and forest plants thus they will not depend anymore by local nurseries usually selling seedlings of poor quality or not guaranteed. At JMBR, a seed storage room was re-designed by purchasing new equipment: APJM and the communities of Jabal Moussa can now count in a small but functional center for the conservation and cultivation of seeds of local species.
7. Guidelines for a sustainable conservation and use of native species were produced by the 2 Reserves and are based on Agro-ecology principles. The aim of the guidelines is to drive and encourage people of the communities of the 2 Reserves that are mainly living of agriculture to protect biodiversity by applying sustainable practices.
These guidelines have been also used during the training on traditional restoration techniques of old abandoned terraces, soil conservation and sustainable farming techniques for the farmers, and unemployed young people in the SBR and JMBR.
8. The above mentioned guidelines have been included in the Management plan of the SBR (2018-2022) and discussed and shared in different occasions with the local authorities, Mayors of the 6 involved villages and 2 union of Municipalities. They will also be used as a base to start the development of the future management plan of the Jabal Moussa Biosphere Reserve.

Results for each deliverable:

Component		Deliverable		
#	**Description**	**#**	**Description**	**Results for Deliverable**
1.0	Coordination, supervision and oversee of all the project's activities	1.1	Quarterly reports and final report (both narrative and financial)	Narrative reports of the progress of the activities were produced by both sub-grantess and by Oikos for the period May-June 2021 (Annex 1), July-December 2021 (Annex 2) and this final report by using a detailed template as reported for example in the Annex 3. As well a financial report was produced every 3 months by all the parties and submitted to the CEPF.
2.0	Protection and conservation of the biodiversity of old terraces areas by enhancing traditional agricultural practices	2.1	1 Power point presentation with topics covered by the training distributed to 120 farmers and 30 unemployed young people (ACS and APJM) and Report of the training (ACS and APJM)	A training on Restoration of old abandoned terraces and Acro-ecology was provided on 18, 23 and 28 of February and on 3 March to 121 farmers and 20 unemployed young people in the SBR at the premises of ACS also with a practical session in the field. A training on Agroforestry was organised in JMBR on February 22 and 23 were a total of 13 farmers and 10 unemployed young participated. A PPT presentation of the Training (Annex 6) and a report of a monitoring visit of the trainer (Annex 8) were prepared by Mr. Mansour Assaf. A report of the training was also prepared by JMBR staff (Annex 7). A report of the training in the SBR was also written by Mr. Mansour Assaf (annex 9). A PPT presentation of the Training on Agroforestry that included topics such as soil conservation and sustainable farming

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				techniques (mulching, composting, minimum and no-tillage, intercropping, polyculture, integrated pest management, water harvesting and storage, use of drought-resistant species was prepared by Mr. Khaled Slim (Annex 10). 50 farmers participated in JMBR (26 February; 5-12 March; 2 April and 7 May 2022) and 121 in the SBR (18, 23 and 28 of February and on 3 March).
2.0	Protection and conservation of the biodiversity of old terraces areas by enhancing traditional agricultural practices	2.2	Final report with the lands evaluation before the restoration, rating sheets, maps and pictures before and after the restoration (report of ACS and report of APJM)	The 37 conservation Agreements signed by ACS in the SBR and by APJM in the JMBR with the farmers involved in the restoration of their lands are including maps, the result of the assessment of the land, type of restoration needed (Annex 11). The Land selection criteria (annex 12) and Land selection Scoring (Annex 13) sheets used by APJM were taken from ACS in the SBR thanks to their test in another project on stonewalls restoration in the previous years. Pictures of the map, the status of the lands, during the works and at their completion are also attached (Annex 14 and 15).
2.0	Protection and conservation of the biodiversity of old terraces areas by enhancing traditional agricultural practices	2.3	Final report of the 5.000 seedlings (SBR) and 6.000 seedlings (JMBR) distribution to farmers (including number and types of seedlings provided, selection of the farmers, pictures of	A total of 5.000 seedling of Origanum syriacum, Damascus rose, old local varieties of grape (Vitis vinifera) "Obeidi" and "Merweh, Malus trilobata, Crataegus monogyna, local varieties of figs and the sour pomegranate were distributed to 65 farmers in the SBR by ACS.

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			the distribution and plantation) (ACS and APJM)	At the same way, in JMBR, a total of 7.739 seedlings mainly of Origanum syriacum but also the Obeidi and Merweh local varieties of grapes, local figs, laurel, old varieties of olives were distributed by APJM to a total of 43 farmers. A report for the distribution of the native species seedling was prepared by ACS and APJM and include the selected farmers, the type of seedlings distributed and the relative numbers (Annex 16, 17 and 18).
2.0	Protection and conservation of the biodiversity of old terraces areas by enhancing traditional agricultural practices	2.4	Power Point presentation of the training on biodiversity monitoring for the staff and for 10 farmers (ACS) and Report of the training (ACS)	The international Expert Mr. Alessio Martinoli provided an online training to the staff of ACS (three, 1 man, 2 women of which one volunteer) and APJM (three, 1 man, 2 women of which 1 volunteer) on Biodiversity monitoring. Four (4) lessons of two (2) hours each were prepared and scheduled on April 21 and 28 and on May 12 and 19, 2022. The topics covered were divided as follows: LESSON 1. Principles of biodiversity monitoring, LESSON 2. Biodiversity monitoring in the SBR. Outcomes, LESSON 3. Wildlife monitoring. Birds and reptiles, LESSON 4. Plant monitoring. These theoretical lessons were followed by a practical session during the visit of the expert to Lebanon from 24 to 26 of May 2022 in both of the two Reserves applying what was explained during the online sessions. Two different PPT presentations on Biodiversity

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				monitoring principles, methods and strategies were prepared by the expert. One was addressed to the staff of ACS and APJM (Annex 19) and another one was tailored to the needs and knowledge of the farmers of the 2 Biosphere Reserve (Annex 20). A total of 14 farmers were trained (7 men and 7 women). A report of the trainings (Annex 21) was also prepared by the expert.
2.0	Protection and conservation of the biodiversity of old terraces areas by enhancing traditional agricultural practices	2.5	Report with selected indicators, monitoring protocols (ACS) and Report with biodiv. monitoring results including maps of the sites, pictures and the final database (ACS) and Report with the biodiversity monitoring results (maps, pictures, database) (APJM)	A complete report with the selection of the indicators, the monitoring protocols and so the methodology used during the activities including maps, pictures a database and the results was prepared by the Expert Alessio Martinoli (Annex 32). In the SBR 110 species were observed in the 9 monitoring sites, 49 in AB sites, 56 in IN sites and 55 in RL sites. This result is somehow surprising, given that IN terraces usually feature a low diversity, due to the management practices that are applied which favour few competitive and stress-tolerant species at the expense of frugal and ruderal species. 19 species previously not recorded were observed during the 2022 monitoring, including 6 species that were only observed in RL terraces. The checklist of plants observed in 2020-2022 in the stone-walled terraces of the SBR counts 351 species. The list includes one species classified as EN by the Lebanese Red List of Plants, namely Orchis anatolica,

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				and 3 classified as NT (Papaver rhoeas, Orchis italica and Scorzonera mollis). 54 species are Lebanese or Levantine endemisms, including Salvia judaica, S. hierosolymitana, Centaurea cheirolopha, Geranium libanoticum, Orchis galilaea, O. anatolica. In JMBR during the training activities, 25 species were observed and identified.
2.0	Protection and conservation of the biodiversity of old terraces areas by enhancing traditional agricultural practices	2.6	Power Point presentation on nursery techniques (APJM) and Report of the training (APJM)	After several practical visits of the staff of ACS to the nurseries of JMBR, on July 22 a theoretical training on Nursery Techniques was provided by two employees of APJM to two members of the staff of ACS: the training was a first guideline for conservation and diffusion of native and wild species. The contents were: 1- Seed collection, cleaning, storage and treatment 2- Preparation of equipment and growing substrate 3- Planting, irrigation, monitoring and hardening A full presentation of the Training on Nursery Techniques provided by the staff of APJM to the staff of ACS was prepared (Annex 22) as well as a report of the training (Annex 23).
2.0	Protection and conservation of the biodiversity of old terraces areas by enhancing	2.7	1 nursery in SBR (ACS) and 1 seed storage in JMBR (APJM)	A new nursery in the SBR was purchased and set up in March 2022. In the nursery ACS was able to produce some of the native species as well as horticultural species in order to support the farmers during the hard socio-

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	traditional agricultural practices			economic situation that the Country is facing. Good practices learned during the Nursery techniques training provided by the staff of APJM to ACS were also applied. In JMBR, the seed storage room was improved by purchasing new equipment that are helpful for the conservation of the seeds as well as to increase the germination rate.
3.0	Promotion of the use of native or "heirloom" species and increase of the revenues generated by products of traditional practices through sustainable and biodiversity-friendly practices	3.1	event/fair with fair trade channel organized at local farmer's markets and 4 products promoted (ACS, APJM), 1 Movie for the promotion of the native species (APJM), MoM of meeting farmers/service ecotourism providers (ACS and APJM)	Several promotional events were held in the SBR and in the JMBR in order to give the right visibility of the achieved results of the project but mainly to give an opportunity to the involved farmers and communities to have a place where to sell the products developed in their lands by growing native species (See pictures Annex 24). A short video was realised by APJM to promote one of these event: https://www.facebook.com/jabalmoussareserve/videos/1194552918042674
3.0	Promotion of the use of native or "heirloom" species and increase of the revenues generated by products of traditional practices through sustainable and biodiversity-friendly practices	3.2	Traditional and original recipes published in the final report (ACS and APJM) and Report of the training (ACS and APJM)	A total of 42 women working in the transformation unit of Jbaa in the SBR and 22 women of the Yachouch rural products center participated in a training related to the transformation of products coming from the native species typical of the 2 reserves, hygiene principles and HACCP (see Annex 24 and Annex 25). Different recipes (Annex 24 and Annex 26) with the 2 local expert on Agrofood were developed and the women proceeded with their production. The results were exposed and sold during the promotional

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				events in the 2 reserves and in the farmers market.
3.0	Promotion of the use of native or "heirloom" species and increase of the revenues generated by products of traditional practices through sustainable and biodiversity-friendly practices	3.3	A new Farmer market in SBR (ACS) and 2 events in JMBR organised for the promotion of the local products (APJM)	An existent farmers market in Barouk located few meters away from one of the main entrance of the SBR was improved with new wooden stands, shade nets etc. The opening of the market was on July 17 and has been working every weekend. It gave a better visibility and opportunity for many farmers (more than 40 stands) that have been able to sell their products grown in their lands. In JMBR 2 events on August 27 and 28 were held to promote the project, the achieved results as well as the products developed by using the new recipes created by the women group of Yachouch. A short promotional video was also realised by APJM.
4.0	Dissemination of the project best practices and their integration in the management plans of the 2 protected areas as a mainstreaming initiative to ensure future sustainability and replicability	4.1	At least 20 "conservation agreements" signed with farmers: 15 in the SBR (ACS) and 5 in the JMBR (APJM)	A total of 37 Conservation Agreements between the 2 reserves and the involved farmers for the restoration of their lands were signed. In particular 13 agreements in the SBR and 24 in JMBR. The high number in JMBR is due to the little area of each land thus a bigger involvement of farmers. (See examples of conservation agreements for ACS Annex 19 and APJM Annex 31).
4.0	Dissemination of the project best practices and their integration in the management plans of the 2 protected areas as a	4.2	Sustainable conservation and use of wild species Guidelines developed (ACS-APJM); Project best practices integrated in the	A local expert in Agroecology, Mr. Khaled Slim, prepared the guidelines on Sustainable conservation and use of wild species with the help of the staff of both reserves (Annex 28) including the land use plans. These guidelines

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	mainstreaming initiative to ensure future sustainability and replicability		management plan (SBR) and development of recommendations for JMBR; Land use plans of buffer zones of the 2 Reserves (ACS-APJM)	have been incorporated in the Management plan of the SBR (Annex 29 page 49) as well as they contain recommendations applicable also for JMBR.
4.0	Dissemination of the project best practices and their integration in the management plans of the 2 protected areas as a mainstreaming initiative to ensure future sustainability and replicability	4.3	Report of the events for the dissemination of the guidelines (ACS-APJM)	An event was organised on May by ACS in order to disseminate the Guidelines on sustainable conservation of the native species. The location was at one of the farmers' market and all the Mayors of the villages touched by the project were invited. A report has been prepared by ACS (Annex 30)
1.0	Coordination, supervision and oversee of all the project's activities	1.2	Signed sub-grant agreements with ACS and APJM, flowing down standard CEPF terms	A sub-grant agreement between Oikos and ACS was signed on July 21st 2021 (Annex 4) and another one between Oikos and APJM on July 30th 2022 (Annex 5). Both were sent to the CEPF on August 18th 2022

Tools, products or methodologies that resulted from the project or contributed to the results:
The Conservation Agreement is a tool that allow the farmer to restore his land by contributing only for a 50% of the whole costs: this mechanism it is also powerful because stimulates the commitment of the farmers. In case of impossibility to participate monetarily, in kind contribution mechanisms have been adopted where the farmers have made available their tools, labor, materials or seedlings and compost produced by them (See annexes 19 and 31).
Regarding the biodiversity monitoring, the training to the farmers resulted very interesting: in this way by training few of them on few indicators such as plants or insects, the two Reserves are now receiving data from the farmers on the presence or not of some species, thus becoming biodiversity sentinels for the Reserves.

PORTFOLIO INDICATORS

Portfolio Indicator Number	Portfolio Indicator Description	Expected Numerical Contribution	Expected Contribution Description	Actual Numerical Contribution	Actual Contribution Description
2.0	Number of hectares of KBAs under improved management (please indicate the KBA names in comments)	5,617	Core areas SBR and JMBR 16,897 ha. Municipalities: Total 6,608 ha covered by forests, shrublands, grazing lands, agricultural lands and unproductive areas for an average of 85%, the ha of the KBAs with enhanced protection or management will be 5,617 ha	5,617	Development of Guidelines for the conservation of native species and their adoption by the SBR (included in their Management Plan) as well in the JMBR
3.1	Number of threatened species dependent on traditional land-use or agricultural practices, seeing status improved (i.e., short-term increase in population and/or breeding success)	7	Status improved Reptiles: Phoenicolacerta kulzeri (EN), Montivipera bornmuelleri (EN) Birds: Serinus syriacus (VU) Plants: Cyclamen libanoticum (EN), Origanum libanoticum (VU),Origanum ehrenbergii (VU), Salvia peyronii (CR)	0	As explained in the "plant species" section, the Salvia peyronii and the Cyclamen libanoticum were not spotted during the monitoring visits thus it's not possible to assume that their status was improved by the actions proposed in the project. The same apply to the Montivipera bornmuelleri. All the other 4 species were monitored and recorded. The training on the methodologies to be used in the biodiversity monitoring provided to the staff and the farmers of both reserves and also the practical session conducted

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					in the fields lead to a monitoring process of the mentioned species to be applied after the end of the project and for the following years. In this way the status of the population of these species is going to be checked periodically.
3.2	Number of traditional products that demonstrate positive impacts on biodiversity, seeing a positive market trends	4	Origanum syriacum, Malus trilobata, Crataegus azarolus, C. monogyna	4	The results can only be revealed in a few years when the seedlings distributed and planted on the restored terraces begin to produce. From local market research the trend remains positive on the potential of these products such as oregano and Lebanese wild apples. Increasing knowledge of how to reduce the negative impact of their direct collection in kind will support production on agricultural land.
3.3	Number of local authorities in 3 priority corridors who recognize the importance of traditional, biodiversity-friendly land-use practices and engage in	8	6 Municipalities, 2 Union of Municipalities	8	The mayors of the 6 municipalities and the representatives of the two municipalities unions of the villages included in the project activities were involved from the beginning during the establishment of a steering committee of

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	supporting their maintenance.				which they were part as well as during the preparation of the Guidelines for the conservation of native local species and the inclusion of these within the SBR Management Plan and basis for that of JMBR. They were also active actors during the events to raise awareness and promote these practices organized by the two reserves.
4.2	Number of unprotected sites important for plants with improved management practices	0	Total of 15 ha of old abandoned agricultural terraces in the development and buffer zones of the two reserves restored and put into production with native and local species	0	A total of 15.15 ha have been restored in the development zones of the 2 Reserves. These lands have been also put into production by growing native species and by adopting sustainable agricultural practices. The restored lands are included inside the Biosphere Reserve so they cannot be considered unprotected since they are regulated by the Management Plan of the Reserves and by laws of the Ministry of Environment.
4.5	Number of locally endemic or highly threatened plant species for which	4	Cyclamen libanoticum (EN), Origanum libanoticum (VU),Salvia peyronii	2	During the monitoring of biodiversity in the Jabal Moussa Biosphere Reserve was not possible to spot the

Portfolio Indicator Number	Portfolio Indicator Description	Expected Numerical Contribution	Expected Contribution Description	Actual Numerical Contribution	Actual Contribution Description
	improved knowledge is available		(CR); Origanum ehrenbergii (VU)		Salvia peyronii and the Cyclamen libanoticum. This it is probably due to a late moment of the monitoring visits in the case of the Cyclamen: after the flowering period and the desiccation of the aerial parts of the plants it's hard to individuate exemplars of this species. For the Salvia the problem was that the monitoring sites didn't match exactly with the limited zones of the presence of this endemic species. For both of the 2 Origanum species there were no problems on their identification in the field and in the restored terraces, both in the JMBR and the SBR.

GLOBAL INDICATORS

Protected Areas

Protected areas that have been created and/or expanded as a result of the project. Protected areas may include private or community reserves, municipal or provincial parks, or other designations where biodiversity conservation is an official management goal.

Name of Protected Area	WDPA ID*	Latitude	Longitude	Country	Original Total Size (Hectares) **	New Protected Hectares ***	Year of Legal Declaration or Expansion

*World Database of Protected Areas

**If this is a new protected area, 0 should appear in this column

*** This column excludes the original total size of the protected area.

Key Biodiversity Area Management

Key Biodiversity Areas (KBAs) under improved management—where tangible results have been achieved to support conservation—as a result of the project.

KBA Name	KBA Code	Size of KBA	Number of Hectares with Improved Management
Sannine-Rihane slopes and heights	LBN15		4,846
Keserwan - Jabal Mousa	LBN07		771

Production Landscapes

Production landscapes with strengthened management of biodiversity as a result of the project.

A production landscape is defined as a site outside a protected area where commercial agriculture, forestry or natural product exploitation occurs.

Name of Production Landscape	Latitude	Longitude	Hectares Strengthened	Intervention
Stone-walled agricultural terraces	34.0412	35.442	771	Sustainable agricultural practices implementes in restored abandoned terraces
Stone-walled agricultural terraces	33.676366	35.670016	4,846	Sustainable agricultural practices implemented in restored abandoned terraces

Benefits to Individuals

- **Structured Training:**

Number of Men Trained	Number of Women Trained	Topics of Training
169	123	Agro-forestry training Agro-food training Land restoration Biodiversity monitoring

- **Cash Benefits:**

Number of Men – Cash Benefits	Number of Women – Cash Benefits	Description of Benefits
35	77	Men were mainly involved in the restoration of their lands thus received an amount of 50% to cover the works; the other 50% was covered by the farmers mainly in kind by providing tools, materials, hours of work spent directly on the restoration, compost, seedlings already produced. Women received some small tools for food transformation to be used at home but also in the transformation units abling them to produce faster and in better hygienic conditions.

Benefits to Communities

View the **characteristics** column below with the following corresponding codes:	View the **benefits** column below with the following corresponding codes:
1- Small Landowners	a. Increased Access to Clean Water
2- Subsistence Economy	b. Increased Food Security
3- Indigenous/ Ethnic Peoples	c. Increased Access to Energy
4- Pastoralists / Nomadic Peoples	d. Increased Access to Public Services
5- Recent Migrants	e. Increased Resilience to Climate Change
6- Urban Communities	f. Improved Land Tenure
7- Other	g. Improved Use of Traditional Knowledge
	h. Improved Decision-Making
	i. Improved Access to Ecosystem Services

Community Name	**Community Characteristics**							**Type of Benefit**									**Country**	**Number of Males Benefitting**	**Number of Females Benefitting**
	1	**2**	**3**	**4**	**5**	**6**	**7**	**a**	**b**	**c**	**d**	**e**	**f**	**g**	**h**	**i**			
Maasser el Shouf village	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☒	☒	☐	☐	Lebanon	18	4
Boutmeh village	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☒	☒	☐	☐	Lebanon	15	7
Khreibeh village	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☒	☒	☐	☐	Lebanon	36	28
Barouk village	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☒	☒	☐	☐	Lebanon	41	34
Yachchouch village	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☒	☒	☐	☐	Lebanon	48	50
Qehmez village	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☒	☒	☐	☐	Lebanon	11	8

Characteristics of "Other" Communities:

Policies, Laws and Regulations

View the **topics** column below with the following corresponding codes:			
A- Agriculture	E- Energy	I- Planning/Zoning	M- Tourism
B- Climate	F- Fisheries	J- Pollution	N- Transportation
C- Ecosystem Management	G- Forestry	K- Protected Areas	O- Wildlife Trade
D- Education	H- Mining and Quarrying	L- Species Protection	P- Other

No.	Name of Law	Scope	Topics														
			A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P

"Other" Topics Addressed by the Policy, Law or Regulation:

No.	Country/ Countries	Date Enacted/ Amended	Expected impact	Action Performed to Achieve the Enactment/ Amendment

Companies Adopting Biodiversity-friendly Practices

A company is defined as a for-profit business entity. A biodiversity-friendly practice is one that conserves or uses natural resources in a sustainable manner.

Name of Company	Description of Biodiversity-Friendly Practice	Country/Countries where Practice was Adopted

Networks and Partnerships

Networks/partnerships should have some lasting benefit beyond immediate project implementation. Informal networks/partnerships are acceptable.

Name of Network/Partnership	Year Established	Country/ Countries	Established by Project?	Purpose
Al-Shouf Cedar Society & Association for the Protecion of Jabal Moussa	2022	Lebanon	Yes	The partnership is a joint cooperation aimed at building capacities and exchanging expertise between the two Biosphere Reserves and their various constituents. (See Annex 27) Joint Activities: • Completion of the joint collaboration that was launched between the two parties within the framework of the "Lebanese Biosphere Reserves Joint Initiative to Revive Traditional Agricultural Practices" project, funded by the Critical Ecosystem Partnership Fund (CEPF) in partnership with Istituto OIKOS. Exchange of information in various fields to serve the development of the Biosphere Reserves, namely: • The revival of ecosystem services, traditional agricultural practices and restoration of abandoned agricultural terraces Biomass management through thinning, pruning, and compost and briquette production; • Biodiversity monitoring for measuring the impact of conservation and restoration on biodiversity • Raising awareness on the importance of revitalizing sustainable practices in land management • Enhancing the role of the local communities in the practices of the two Biosphere Reserves, in biodiversity conservation and protection of important heritage sites

Name of Network/Partnership	Year Established	Country/ Countries	Established by Project?	Purpose
				• Collaborating in other areas: ecotourism, prevention of forest fires, etc. • Presenting joint proposals to donors that aim at strengthening the roles of the two Biosphere Reserves and increasing their resilience against climatic, economic and social challenges.

Sustainable Financing

Sustainable financing mechanisms generate funding for the long-term (generally five or more years). These include, but are not limited to, conservation trust funds, debt-for-nature swaps, payment for ecosystem services (PES) schemes, and other revenue, fee or tax schemes that generate long-term funding for conservation.

Name of Mechanism	Purpose	Date Established	Description	Country/ Countries	Project Intervention	Delivery of Funds?

Globally Threatened Species

Globally threatened species (CR, EN, VU) on the IUCN Red List of Threatened Species, benefitting from the project.

Genus	Species	Common Name (English)	Status	Intervention	Population Trend at Site
Origanum	ehrenbergii	Ehrenberg's Marjoram	VU	Guidelines on native species conservation included in the Management Plan of the SBR and suggested for the future Management plan of JMBR Species monitoring	Stable
Cyclamen	libanoticum	Cyclamen du Liban	EN	Guidelines on native species conservation included in the Management Plan of the SBR and suggested for the future Management plan of JMBR	Stable

Genus	Species	Common Name (English)	Status	Intervention	Population Trend at Site
				Species monitoring	
Salvia	peyronii		CR	Guidelines on native species conservation included in the Management Plan of the SBR and suggested for the future Management plan of JMBR Species monitoring	Stable
Serinus	syriacus	Syrian Serin	VU	Species monitoring	Stable
Phoenicola certa	kulzeri		EN	Species monitoring	Unknown
Montivipera	bornmuelleri	Lebanon Viper	EN	Species monitoring	Unknown

LESSONS LEARNED

1. Implementing a project on restoration and biodiversity monitoring is already a big challenge but in only one year it's really ambitious:
In order to see a real impact on biodiversity the minimum time needed is at least 2-3 years by giving the right time to the biodiversity to recover and improve. In previous longer project this was possible thanks to the longer period of implementation and so to different season of monitoring of the biodiversity.
2. Including birds in monitoring of biodiversity in a small restoration programme it is also challenging: birds are covering huge areas and it's quite difficult to prove that the restoration of a small part of the landscape impacted their presence (in positive or negative). Plants are easier as well as pollinators are good indicators that can be accounted for god results.
3. Exchange of knoledge and experience between different reserves in the same country or also of different countryes is always a benfit: the 2 reserves involved have now a better knowledge on biodiversity monitoring methodologyes as well as on nursery techniques. It must be supported in poroject proposal calls as much as possible.

SUSTAINABILITY/REPLICATION

1. Staff of the 2 reserves and the farmers trained on Biodiversity monitoring: the methodology used and the knowledge acquired will lead the two Reserves on having a monitoring process schedule to be applied also after the end of the project and to do not depend by external experts unless for the identification of the species. Having trained the farmers is also supporting the two reserves by cutting-off the costs of the monitoring and by having the farmers as sentinel of some targeted species.
2. The construction of the nursery in the SBR and the technical expansion of the seeds storage in the JMBR allow them to no longer depend on external nurseries but to self-produce seedlings of local native varieties of guaranteed quality and also to support farmers by offering these at a fairer price.
3. The restoration of the abandoned agricultural terraces already had a great impact on the local farmers especially in Jabal Moussa where for the first time was taken into action this kind of activity and resulted into new applications for the restoration received by the two Reserves. The proposed and signed Conservation Agreements also guarantee the commitment of the farmers on mantaining the lands under sustainable agricultural practices in the following years.
4.The enhancement of the farmers market in the SBR and in the JMBR was a great idea especially in relation to the particular period that the country and the farmers are living: in this way they have now a very visible and attractive place where to sell their products.
5. The inclusion of local authorities, staff from both reserves, the cooperatives of farmers and other volunteers in the preparation and dissemination of guidelines for the conservation of local native species even if not easy to apply given the different people included in the process, It has led to the inclusion of the same in the SBR management plan and now represent the basis for the future JMBR management plan. This will ensure the application of certain sustainable farming practices within the two protected areas in the coming years.

ENVIRONMENTAL AND SOCIAL SAFEGUARDS/STANDARDS

Strengthened management of a protected area: even if the project did not directly lead to stricter measures related to the harvesting of wild species, during the preparation of the guidelines concerning the conservation of the wild species with the collaboration with the local authorities and the staff of the 2 reserves, and during the dissemination activities, the local communities was informed about the ministerial decision (179/1 2012) to regulate the wild harvesting of two species (Origanum syriacum and Salvia fruticosa). This regulation was also illustrated during the training on Agroecology provided to the farmers of the Reserves. The project provided alternative livelihoods through the cultivation of wild species in the restored lands also linking them to marketable products, thus enhancing the yield to locals while reducing pressures on the wild populations.

Istituto Oikos has developed a grievance mechanism with the cooperation of the staff of the two reserves, providing local communities around the 2 KBA with the means by which they can raise issues, complaints or simply request information about project activities.
Posters with relevant information were then prepared and displayed in each entrance of the two reserves, in their offices and at the entrance of the municipalities involved.
No complaints were recorded. (see Annex 33 and 34).

ADDITIONAL COMMENTS/RECOMMENDATIONS

ADDITIONAL FUNDING

Total Amount of Additional Funding Actually Secured (USD)	$2,027,558.00
Breakdown of Additional Funding	Co-funded by the Italian Agency for Development Cooperation - AICS DURING PROJECT : 65857$ Amount in USD: Salary Project Manager 4.333,00 IO's HQ general support 4.250,00 Office rent 1.200,00 Office maintenance 320,00 Office Utilities 300,00 Travel Project Manager 450,00 Insurance Project Manager 170,00 ADDITIONAL SUPPORT FOR EXTENSION (prepared during project and approved just after project completion): 1,885,000€ (=1 961 112$) for extending activities on same sites

INFORMATION SHARING AND CEPF POLICY

CEPF is committed to transparent operations and to helping civil society groups share experiences, lessons learned and results. For more information about this project, you may contact the organization and/or individual listed below.