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LIFE Project Number
LIFE17 GIE/IT/000477

Final Report
Covering the project activities from 01/10/2018¹ to 31/03/2022

Reporting Date²
30/06/2022

LIFE PROJECT NAME or Acronym
SOIL4LIFE

Data Project

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¹ Project start date

² Include the reporting date as foreseen in part C2 of Annex II of the Grant Agreement

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Package completeness and correctness check	
Obligatory elements	✓ or N/A
Technical report	
The correct latest template for the type of project (e.g. traditional) has been followed and all sections have been filled in, in English <i>In electronic version only</i>	✓
Index of deliverables in English <i>In electronic version only</i>	✓
<u>Final report</u> : Deliverables not already submitted with the MTR annexed including the Layman's report and after-LIFE plan Deliverables in language(s) other than English include a summary in English <i>In electronic version only</i>	✓
Financial report	
The reporting period in the financial report (consolidated financial statement and financial statement of each Individual Beneficiary) is the same as in the technical report with the exception of any terminated beneficiary for which the end period should be the date of the termination.	✓
Consolidated Financial Statement with all 5 forms duly filled in and signed and dated <i>Electronically Q-signed or if paper submission signed and dated originals* and in electronic version (pdfs of signed sheets + full Excel file)</i>	✓
Financial Statement(s) of the Coordinating Beneficiary, of each Associated Beneficiary and of each affiliate (if involved), with all forms duly filled in (signed and dated). The Financial Statement(s) of Beneficiaries with affiliate(s) include the total cost of each affiliate in 1 line per cost category. <i>In electronic version (pdfs of signed sheets + full Excel files) + in the case of the Final report the overall summary forms of each beneficiary electronically Q-signed or if paper submission, signed and dated originals*</i>	✓
Amounts, names and other data (e.g. bank account) are correct and consistent with the Grant Agreement / across the different forms (e.g. figures from the individual statements are the same as those reported in the consolidated statement)	✓
Beneficiary's certificate for Durable Goods included (if required, i.e. beneficiaries claiming 100% cost for durable goods) <i>Electronically Q-signed or if paper submission signed and dated originals* and in electronic version (pdfs of signed sheets)</i>	
Certificate on financial statements (if required, i.e. for beneficiaries with EU contribution ≥750,000 € in the budget) <i>Electronically Q-signed or if paper submission signed original and in electronic version (pdf)</i>	

Other checks	
Additional information / clarifications and supporting documents requested in previous letters from the Agency (unless already submitted or not yet due) <i>In electronic version only</i>	✓
This table, page 2 of the Mid-term / Final report, is completed - each tick box is filled in <i>In electronic version only</i>	✓

**signature by a legal or statutory representative of the beneficiary / affiliate concerned*

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2. List of key-words and abbreviations

AIAB - *Associazione Italiana per l'Agricoltura Biologica*
AFA - Additional Financial Annex
ATA - Additional Technical Annex
AGIA- *Associazione Giovani Imprenditori Agricoli*
ANABIO - *Associazione Nazionale Agricoltura Biologica*
ANCI - *Associazione Nazionale Comuni Italiani*
APPA - *Agenzia Provinciale per la Protezione Ambientale*
ARPA - *Agenzia Regionale per la Protezione Ambientale*
ARSIAL - *Agenzia Regionale per lo Sviluppo e l'Innovazione dell'Agricoltura del Lazio*
CAP - Common Agricultural Policy
CCIVS - Coordinating Committee for International Voluntary Service
CIA – *Confederazione Italiana Agricoltori*
CREA - *Consiglio per la Ricerca in agricoltura e l'analisi dell'Economia Agraria*
CRPA - *Centro Ricerche Produzioni Animali*
DAGRI - *Dipartimento di Agronomia e Gestione del Territorio*
DGR - *Delibera di Giunta Regionale*
DIBAF - *Dipartimento per la innovazione nei sistemi biologici, agroalimentari e forestali*
DOOH - Digital Out of Home
EC - Executive Committee
ERSAF - *Ente Regionale per i Servizi all'Agricoltura e alle Foreste*
FM - Financial Manager
GI - Green Istria
INU - *Istituto Nazionale di Urbanistica*
ISPRA - *Istituto Superiore per la Protezione e la Ricerca Ambientale*
LEGAMB - Legambiente
LIFE SAM4CP - LIFE project Soil Administration Models 4 Community Profit
LLGG VGSSM - Voluntary Guidelines for Sustainable Soil Management
MITE - Ministry for the Ecological Transition
MIBACT - Ministry of Culture
MIPAAF - Ministry of Agricultural, Food and Forestry Policies
MIT - Ministry of Sustainable Infrastructures and Mobility
MOOC - Massive Open Online Course
MOU - Memorandum of Understanding
MFA - Mandatory Financial Annex
MTA - Mandatory Technical Annex
MTR - Mid Term Report
NA - Not Available
NIC - New Cartographic Infrastructure
PA - Project Assistant
PAESC - *Piano d'Azione per l'Energia Sostenibile e il Clima*

PC - Project Coordinator
PM - Project Manager
POLIMI - *Politecnico di Milano*
PRG - *Piano Regolatore Generale*
RAI - Radiotelevisione italiana
ROMCAP - *Roma Capitale*
RET - *Regolamento Edilizio Tipo*
RPT - *Rete delle Professioni Tecniche*
SAPEA - Science Advice for Policy by European Academies
SC - Steering Committee
SISS - *Società Italiana della Scienza del Suolo*
SNPA - National System for Environmental Protection
SSPO - Special Soil Protection Office
UN - United Nation
WSD - World Soil Day
WG - Working Group

3. Executive Summary

The Soil4Life project started on the **1st of October 2018** and it ends on the **31th of March 2022**. The partnership included seven Italian partners, one international NGO engaged in the field of International Voluntary Service and a Croatian non-profit citizen association.

The project foresaw the implementations of two preparatory actions (**A1** and **A2**) which were both concluded within the second year of the project without particular problems, eight core actions (actions **B1 – B8**), two actions devoted at the monitoring of the project impact (actions **C1** and **C2**), and two communication actions (actions **D1** and **D2**). Finally, the project foresaw the implementation of two actions designed to monitor the project's progress (actions **E1**, and **E2**). All these actions were concluded contextually at the end of the project.

The project's activities were carried out without relevant problems and in compliance with the expected deadline and respecting the expected working plan. The limitations imposed by the sanitary emergency due to the Covid-19 in the years 2020 and 2021 had some significant impacts on the timing and in the setting of some activities, especially those addressed to schools and to the involvement of citizens that foresaw the realisation of in person meetings, training courses and public events (i.e action **B3**, **B4** and **B5**).

The Action **A1** ended with the preparation of an Executive Action Plan of activities, and the carrying out of a survey on best practices. The project's Communication Plan was also elaborated in the context of this action. The action **A2**, which calls for adaptation of the tool developed under the LIFE SAM4CP project (LIFE13 ENV/IT/001218), encountered some impediments which caused some delays in achieving the expected results. These impediments were due to data availability requested to Rome Municipality and Lombardy Region necessary for the following assessment on the future scenarios 2030. Notwithstanding this delay, this action was successfully concluded, and two scenarios of soil ecosystem loss, following soil consumption expected in urban/regional planning (temporal coverage 2018-2030), within the Municipality of Rome Capital and the Metropolitan City of Milan were realised. The action **B1**, aimed at implementing an awareness campaign for public bodies, has faced some delay in its implementation but all the expected results (Permanent Consultation Board, White Paper and of the Charter of Principles for Sustainable Soil Use) were successfully achieved. In particular, the Charter of Principles for Sustainable Soil Use was adopted by **24 local authorities** from Municipalities (9) and Regions (15), more than the 12 expected by the project's proposal. Moreover, the after LIFE activity for the promotion of the Charter of Principles for Sustainable Soil Use has already started and **14 other municipalities**, including the municipality of Rome, have already adhered to the Charter through an official declaration. The reason of this delay lied in the fact that the Italian Environmental Ministry expressed its willingness to include in the permanent consultation board, one of the expected results of this action, four Italian Ministries (MATTM, MIT, MIBACT, MIPAAF) and to institutionalise it through a specific decree which was delivered on 13.02.2020. On the other hand, this national legal tool which was not considered in the project proposal, will undoubtedly constitute a strong impulse to national policy on soil consumption prevention and land restoration. The action **B2** leads to the institutions of **15 Regional Observatories on Soil**. The representatives of these Regional Observatories had also all adopted the Charter of Principles for Sustainable Soil Use (see previously). This action was not excessively affected by the limitations imposed by the pandemic emergency. In fact, the activities foreseen in the context of this action, more specifically the bilateral meetings with the regional administrators, were also carried on remotely. During the project lifetime, **more than 60 meetings** have been carried on with the representatives of **16 Italian Regions**. The training activities addressed respectively to farmers (action **B3**) and professionals as agronomists, architects, geologists, geometers and engineers (action **B4**), were successfully concluded. As part of action **B3**, the FAO manual has been translated and the voluntary guidelines for farmers were drawn up. Training has started on schedule and all the

preliminary forums as well as the three training courses addressed to technicians were carried on. The first of the expected 40 training courses addressed to farmers had already been planned to start at the beginning of March 2021, when the lock down imposed by the Covid-19 happened. Taking into consideration the current limitations due to the sanitary emergency, and the consequent difficulties to realise public events, the 40 training courses addressed to farmers were substituted by a remote video platform (*CIA per il suolo* - CIA for the soil, website: <https://www.ciaperilsuolo.it>), including documents, videos and technical forms and to which farmers can have access through the filling in of an online registration form. The platform allowed us to go forward with the informative activities and it had the added value to reach more farmers than expected and to provide an informative product being available also after the end of the project. At the end of the online courses, farmers have received the assignment of “Soil Custodian”. During the project’s implementation, a total of **7.500 farmers** were involved, with **884 of them becoming “Custodians of the Soil”**, signing and adhering to the voluntary guidelines. Moreover, a monthly newsletter was created including articles drafted by the CIA’s technical staff. The newsletter, which was not foreseen in the project proposal, was an adjunctive way to promote and disseminate the voluntary guidelines. Due to restrictions caused by the sanitary emergency, the Soil Festival took place later than expected (March 2022 instead of October 2021) and it was organised as a remote event. Similarly, also the **6 “Soil Days”** took place remotely. In the context of the action **B4**, a specific Forum for Sustainable Soil management took place in Rome on 12.12.2019 in order to define the structure and the contents of the Voluntary Guidelines on soil protection for professionals. The final version of the document, including all the contributions collected until the end of January 2020, was delivered on 30 April 2020 and it was published by *INU Edizioni* in an e-book format downloadable for free from both the project’s and the publisher’s websites. The teaching programme was defined on 30 April 2020 while a preliminary teaching course was released in Rome, for engineers only, in early 2019. At the end of the training course, the participants had the possibility to adhere voluntarily to the guidelines through an online questionnaire. With the initial target of the action foreseeing the voluntary signing of the guidelines of 600/800 professionals, the organisation of the 3 cycles of training meetings and the asynchronous version carried out in the above-mentioned way witnessed the participation of **about 7,800 professionals with more than 3,000 signing** the Voluntary Guidelines. To this, there should also be added the results which will come from the asynchronous course still available at least until the end of 2022.

The implementation of the action **B5** (National and International Campaigns for Citizens) was seriously affected by the lock down due to the pandemic emergency, since most of the activities were postponed or substituted with remote ones. Anyway, notwithstanding these impediments, all the expected results of this action (3 conferences addressed to the general public, an Edu-Kit, a school contest, informative seminars for teachers, draft of a Position Paper, **3 Preparatory Seminars, 4 International Forums** in 4 different countries and one Final Conference) were implemented during the project lifetime. The action **B6**, a pilot study on the topic of soil sealing implemented in the municipality of Rome, led to the draft of useful management tools to counteract the loss of permeability due to cementification in urban areas, namely **3 Soil Permeability Maps**, Guidelines and a Municipal Plan for Soil Permeability containing a series of interventions that the municipal administration will be committed to implementing to progressively mitigate the problem of the city’s soil impermeabilization (sealing). The provided guidelines will contribute to the modification of the future New General Building Regulation for the Municipality of Rome. The second pilot study, foreseen within the framework of the action **B7** and addressed to identify the best management procedures for maintaining or restoring adequate organic carbon content in agricultural soils, was successfully concluded. Technical reports, a Model of integrated management plan for farms and Technical Recommendations were drafted as well as a map showing carbon presence into the soil. Within the action **B8**, aimed at the strengthening of the capacity building of local youth organisations, the communication toolkit was created at the very beginning of the project and the training course for “Soil Ambassadors” took place in November 2019, involving **29 participants** from different European countries. A first draft of the Soil4Life Manifesto was collectively created during the

Training Course, after consultation and feedback it was launched online on World Soil Day 2019. It was a collaborative effort and received input from various diverse voices. The finalised version of the Manifest was officially launched at the end of August 2021 and it was delivered in March 2022 to the European Commission and presented during the International Conference which took place online from 15 to 17 March 2022. During the project lifetime, **529 individual and collective adhesions** to the Manifest were collected. The local campaigns were postponed due to the circumstances with Covid-19 (January 2021 instead of January 2020). CCIVS prepared and sent out the CALL for Local Actions and promoted this CALL through its mailing, newsletters and social media channels. In total, eight international voluntary service organisations joined and organised local actions focusing on climate change and environmental sustainability. Among them, three had a special focus on soil management and conservation. Under the action **C1** a Soil governance indicators table was created and three anonymous questionnaires were drafted and distributed to people involved in training activities, as expected under the actions **B3** (farmers), **B4** (professionals) and **B8** (young environmentalists). Both the ex-ante and the ex-post national surveys on the general public (sub-actions **C.1.4**) have been launched and **2 Reports** were drafted showing the interest of interviewed people in taking part in events to learn about soil degradation. Also the ex-ante and the ex-post surveys expected in the context of the action C2 were carried out, and the comparison of results achieved supported the ability of the project to affect the aspects linked to territorial planning and the development of building skills linked to the urban regeneration of the existing built fabric. Among the most important contributions that are recognized to the project is the increased level of awareness of the environmental benefits that are associated with the adoption of sustainable land management practices.. As regards the action D1, the Dissemination planning and execution has started at the beginning of the project and lasts for the whole project duration. Most of the expected products (visual identity, website, leaflet, roll ups, information boards, press kit, gadgets) were delivered during the first 6 months of the project. Moreover, one brochure in Italian, English and Croatian was elaborated and distributed on occasion of in person events. Also **10 video clips** were produced and spread through the social channels and the project's website. The first press conference of the project's presentation was held on the occasion of the World Soil Day 2018 (05.12.2018) while the final conference took place in Rome on the 29th of March 2022. Due to pandemic restrictions regarding mobility the foreseen press tour has been replaced by a journalistic video reporter on land use and consumption in the urban areas of Rome and Milan. **Three editions** of the event "Together4Soil" took place yearly in Rome and Milan. The networking and replicability activity, envisaged under action **D2**, concluded successfully with **39 relevant projects identified and with 26 of them**. successful contacts, meetings, joint events and exchange of information were taken. A "LIFE Day" was organised involving the representatives of 8 LIFE Projects. Finally, the implementation of the actions **E1** and **E2** proceeded without relevant problems and they assured the effective management of the project and the monitoring of both technical and financial progress. The project management structure comprised a Steering Committee (SC), with a role of guidance and control, and an Executive Committee (EC) which guaranteed its operation. A monitoring table was drafted to monitor and evaluate the regular proceeding of the project's activities as well as the respect of the deadlines in reaching milestones and in delivering the expected deliverables. Overall coordination of the initiative was ensured by a project manager and a project coordinator with experience in the management of LIFE projects, together with a financial manager with considerable expertise in reporting of European projects. Implementation of the individual actions was ensured by specific working groups (one for each action) in which the contact persons of the various partners involved participated. During the lifespan of the Soil4Life project some changes happened regarding the substitution of people in charge of the coordination for different beneficiaries, but these changes have not significantly affected the correct implementation of the project's activities. As regards administrative issues, we can declare that the trend of expenditure have regularly proceed for both private and public beneficiaries

4. Introduction

4.1 General context, environmental issues and baseline situation

Soil and land degradation processes, both at global and local level, have gained growing interest over the last few years. The Agenda 2030 (approved by UN in 2015) with its thematic target (SDG 15) of pursuing globally a ‘land degradation neutrality’, and the subsequent issue of the global assessment report on Land Degradation and Restoration (IPBES, 2018), received a wide echo from the media, resulting in a generalised increase in awareness about the global threats on soils. In Europe, the SOER 2020 State of the Environment Report (EEA, 2019) records a growing pressure of fragmentation on ecosystems notwithstanding a measurable decrease in progression of land take and soil sealing. Since land recycling for urban development’s still provides a small contribution to land use efficiency, the 2050 target of ‘no net land takes’ (7th EAP) is unlikely to be met. With regard to soil degradation, intensive agriculture is addressed as the main driver of processes leading to loss of organic carbon, and related negative impact on soil biodiversity, erosion and reduction of resiliency towards the effects of climate change. Soil preservation is also a topic of the pivotal communication on European Green Deal (Communication (2019) 640), with regard to the contribution of soil organic matter to carbon cycling and to combat the contamination from agrochemicals, within a framework of efficient resource management. As part of the Green Deal, two crucial documents for soil and its agricultural use have recently been published by the European Commission (20th May 2020): the ‘biodiversity’ and the ‘Farm to Fork’ strategies (COM (2020) 380/381), aimed to sustainable agri- and food systems, with a next step announced for 2021 with the revision of the Soil Thematic strategy. The effectiveness of these strategies in improving the state of soil in the EU will strongly depend on the way in which they will be carried out through the national implementations of Common Agricultural Policy (CAP), presently under finalisation of the legislative reform process at the EP (in force from 2022).

In the whole of these very relevant steps forward for soil policies, many have clearly highlighted the lack of a binding legal framework of measures and targets on soil preservation as the main weak point in the road map, e.g. the Group of Chief Scientific Advisors in its scientific opinion to the EC ‘Towards a Sustainable Food System’ (March 2020); SAPEA (Science Advice for Policy by European Academies) in its report ‘*A sustainable food system for the EU (2020, www.sapea.info/topics/sustainable-food/)*’ stresses that “soil quality has been argued to be of key importance for realising a shift towards a more sustainable EU food system, but currently remains largely unaddressed in EU legislation”, and the European Court of Auditors already in 2018 recommended “a legal framework to assess land degradation and desertification and to support the MS to achieve land degradation neutrality in 2030”.

From the whole of examined documents, many provided to EC and its directorates, we can argue that the definition of binding policy targets for soil preservation and restoration is recognized as a milestone for the implementation of the whole framework of sustainability strategies and policies, and the EC is aware about this priority. Resistances to a legislative process works at the level of Member States and groups of interests. It is also the case of Italy, where discussion on soil degradation and land take is in active progress, well supported by monitoring and reporting activity performed by the national environmental agency (ISPRA), but a law on soil conservation is still lacking although many proposed texts are under discussion from many years by the national Parliament.

The Soil4life project acted in the stream of awareness building and competence sharing, dialoguing with the societal and economic sectors, starting from the national level and moving towards wider layers of citizenship in the European community.

The overall objective of the Soil4Life project was to promote the sustainable and efficient use of soil and its resources in Italy and Europe. To reach this objective, within the Soil4Life were implemented a set of actions aimed at:

1. Improving the governance of soil-related decision-making processes at national, regional and local levels and providing decision makers and stakeholders with evidence-based information on soil protection and tools to support the planning process. As stated before, the lack of a binding legal framework of measures and targets on soil preservation at national level constitutes the main weak point in the road map. In order to improve the efficiency of the governance processes, the Soil4Life project provided the realisation of a permanent consultation board composed of institutional subjects who are variously involved in soil management and protection, and two specific documents addressed to Government and relevant Ministries (White Paper) and to local authorities (Charter of Principles for Sustainable Soil Use). The project also promoted the utilisation of an easy-to-use simulator; aiming at supporting territorial decision makers to include the ecological functions of soil within the assessment of the environmental and economic costs and benefits associated with urban planning and land-use measures and choices.
2. Increasing knowledge and awareness of: (i) farmers, of the key role played by the agricultural sector in soil protection, and (ii) professionals (agronomists, architects, geologists and geometers), on the soil problem. The involvement of these two target groups is extremely important for the implementation of an effective strategy aimed at the sustainable soil management in both the agricultural and the urban context. Through the training activities and the voluntary adoption of specific guidelines, the project Soil4Life contributed to increase the consensus and the involvement of these categories of stakeholders creating the foundations for a process aimed at increasing soil quality and preservation.
3. Increasing citizen's consensus toward policies for soil protection. Making citizens and civil society aware of the importance of soil protection and management allows to create an important driving force in promoting the adoption by European policy makers of measures suitable for soil protection. In this respect the Soil4Life project contributed to increase the capacity building of local youth organisations and their active involvement in the awareness campaigns.
4. Making European institutions and Member States aware of the need to adopt appropriate regulations aimed at reducing soil consumption and promoting sustainable use of soil. Soil protection requires the adoption of specific rules geared towards its sustainable and efficient use, but in Italy and Europe there is still no adequate regulatory framework. In this respect, the Soil4Life project acted in supporting the awareness increase of European and national institutions on the need to adopt appropriate regulations to reduce soil consumption and to promote sustainable use of soil, through a specific awareness campaign (see also par 6.4.7)..
5. Promoting reduction of land use in urban planning. Soil reduction due to urbanisation is one of the most serious environmental issues in Europe. The Soil4Life projects contributed to drawing attention to this aspect through a demonstration pilot to be implemented in the municipality of Rome on the topic of soil sealing.
6. Increasing awareness of farms and stakeholders about ecosystem services generated by the adoption of best practices aimed at maintaining or restoring adequate organic carbon content in agricultural soils. Society strongly depends on fertile soils and on their long-term maintenance for the production of food as well as various ecosystem services. Ensuring the delivery of these ecosystem services constitutes a key issue and people involved in utilisation and management of agricultural soils should be made aware of the best methodologies used to preserve and maintain the organic matrix. The Soil4Life project contributed to provide good practice in this context through the implementation of a specific pilot study in Lombardy finalised at maintaining or restoring adequate organic carbon content in agricultural soils. The

project also provided technical recommendations for the sustainable enhancement of organic matrices in agricultural soils.

4.2 Information/communication strategy implemented in function of the environmental problem addressed by the project

Generally, in Italy the problem of soil consumption is perceived only as a function of hydrogeological instability connected to catastrophic events, such as landslides and floods. The level of awareness concerning the vulnerability of the soil resource and related ecosystem services is still insufficient. For this reason, we are trying to build a coherent and attractive communication, scientifically correct but not too technical, and with an easily recognizable brand identity. With the help of the Unik communication agency, we have studied a special logo representing the project mission, with a payoff easy to remember and belonging to The Little Prince (Fig. 1).



Figure 1: The Soil4Life logo and payoff

Soil is extremely important for life on the planet. The strapline "The essential is invisible to the eye", underlines the fundamental importance of what we often take for granted and whose existence we often do not even perceive. Effective communication is expected to include a good popularisation, a shared terminology and basic information on the topic. For this reason, we have tried to simplify the concepts of soil and land degradation, to illustrate the scope of the problem from a scientific point of view, often underestimated by the media. Consequently, we have considered the existing regulatory framework, and have tried to show the close connection between soil and life on the planet. Communication is expected to be addressed to both stakeholders and the general public. In order to achieve this purpose we used different tools: the website www.soil4life.it and the social networks dedicated to the projects. Facebook (facebook.com/@legambientelab), Twitter (@legambientelab) and Instagram (@legambientelab) were used to spread editorial content published on the website, relevant scientific or technical articles on soil exploitation, posts on future activities, training courses, seminars and workshops. We also used infographics and slides to illustrate the state of health of the soil in Italy and Europe. Finally, we described transformations over time, the places of regeneration, sustainable enhancement, pilot experiences connected to the project. On the occasion of events, anniversaries and current events relating to the soil, press releases were sent to national and local mailing lists and published in *La Nuova Ecologia*, our monthly paper and online newspaper.

4.3 Stakeholders targeted

The main stakeholders involved in the project activities are:

Ministries: Italian ministries (MITE, MIBACT, MIPAAF, MIT) were targeted by the activities implemented within the action B1, in particular the White Paper and the Charter of Principles for Sustainable Soil Use. Moreover, Italian Ministries were also targeted by the advocacy activities carried on within the sub action B5.3;

ANCI: The Italian communes were targeted mainly by the activities implemented within action B1 (Charter of Principles);

Regions, Provinces and Municipalities: Regions, Provinces and Municipalities were targeted through the Charter of Principles (action B1). Moreover, the Italian regions were also targeted by their involvement into the Regional Observatories (action B2);

Schools: Italian students and teachers were targeted by the sub-action B5.2 through the design and implementation of an educational initiative and the development of an educational toolkit, one guide for teachers and a contest addressed to students;

Media (TV, Print, Radio, Social Media): were targeted by the communication and dissemination activities foreseen in action D.1 in order to inform the public (Citizens /final consumers) and to put public pressure on political decision makers. Moreover, they were also targeted by the dissemination activities implemented within the sub-action B5.1;

Farmers: were targeted by the training activities carried on within the action B3 and through the activities implemented in the pilot study in Lombardy region (action B7);

Technical Professional Networks: were targeted by the training activities carried on within the action B4;

Youth volunteer associations and environmental associations: were targeted by the capacity building process and through the local campaigns implemented within the action B8. The environmental associations were also involved in the national and international activities implemented within the sub-action B5.3.

4.4 Monitoring of the project impact

The project's impacts will concern the following sectors:

SECTOR	IMPACT	MONITORING
Agriculture	Increase of awareness and knowledge on conservative agronomic practices more sustainable from an ecologic point of view	N° of voluntary LLGGs adopted by farmers. N° of farms accessing the platform “ <i>CIA per il suolo</i> ”. N° of “Soil Custodians”.

Urban planning	Increase of knowledge on innovative urban models. Realisation of a permeability plan. Availability of a specific simulator assessing the environmental and economic costs and benefits associated with urban planning and land-use measures and choices	N° of voluntary LLGGs adopted by professionals (agronomists, architects, geologists and geometers). Adoption of the urban permeability plan. Utilisation of the simulator provided
Local communities	Increase of awareness and knowledge on ecological issues and soil protection	Meeting attendance. Adhesion to school contest. N° of local campaigns. N° of Soil Ambassadors. N° of people/associations who adopted the Soil Manifest.
NGOs/associations	Increase of awareness on the need of adoption of soil protection measures by European policy makers.	Forum attendance. N° of adhesion to the Position Paper
Public Administrations	Improving the governance of soil-related decision-making processes at national, regional and local levels	Institution of Regional Observatories. Adoption of the White Paper. Adoption of the Charter of Principles for Sustainable Soil Use

4.5 Socio-economic context

The socio-economic context in which the Soil4Life project operated is characterised by the absence of a binding European directive and the lack of a national framework law on soil management, which could provide an action framework within which local authorities can adopt applicative regulations. This regulatory vacuum has generated the multiplication of regional and local legislative initiatives, producing a significant territorial inhomogeneity. This legislative fragmentation is also reflected in the information systems, which instead should be standardised to allow a correct assessment of the territorial dynamics. The definition of soil itself remains an unsolved problem, since it is an area on which various interests insist, from collective ones, such as the preservation of ecosystem services, to private ones, such as decisions on agronomic techniques, and which intertwines numerous policies and disciplines. To this end, it is necessary to put in the hands of local authorities' tools of simple implementation for the assessment and monitoring of soil ecosystem services, promoting as much as possible the urban regeneration, regeneration of existing fabric and the activation of mechanisms and solutions that meet the principles of circular economy. It is also considered a priority to recognize and possibly reward the value of ecosystem services provided by agroforestry and forestry operators, since a large part of the quality of life in urban areas depends on the management of soils in peri-urban and rural areas.

4.6 Expected long term results

The implementation of the Soil4Life project will provide the achievement of several long term results as also described in the After LIFE Communication Plan (Annex MTA22). A first important result is

the establishment of a permanent consultation board on sustainable soil management (action B1), the institution of 15 Regional Observatories (action B2) and the establishment of a special office for the protection of soil (action B6). All these institutional bodies will continue their activity also after the end of the project, thus ensuring the continuation of the activities started with the LIFE project.

As regards the results achieved within the action B6, it should be stressed that Roma Capitale approved the “Implementing Guidelines”, which have been developed during the elaboration of the Municipality Permeability Plan, through a Municipal Council Resolution (DCG n.233 of 08.06.2021, see par 6.1.8 for further details). The guidelines will be therefore included in the future Building regulation of the Municipality of Rome, providing planning indications for the future building strategy of the city of Rome. This collection of the best methods/solutions to increase soil permeability can also be used by other municipal administrations, at national and international level, which have similar problems to those of Rome. Moreover, Roma Capitale is even approving an Agreement with Arsial to pursue the activities of data collection and to ensure the update and upgrade of Maps and Guidelines.

The changes of the training activities programs and structures (actions B3 and B4), realised as a consequence of the lockdown due to the sanitary emergency, will provide didactic products being available also after the end of the project. More precisely, the choice taken by some national councils to extend the initiative available within the action B4 also in using FAD asynchronous allows for those registered to exploit the online events of the training days over a longer period of time than that of the project, further contributing to spreading the guidelines amongst the professionals in the sector. A similar situation occurred thanks to the realisation of the web platform “*CIA per il suolo*” (see par 6.1.5 for further details) allowing to spread the FAO guidelines and other content for the farmers resulting from the project, also after the project’s end.

Similarly, the Living Earth MOOC (see par 6.1.10) will form part of the CCIVS Living Earth Campaign (LIVE) as follow up to Soil4Life activities. The mentorship program will empower young people, volunteers, activists, CCIVS member organisations and individuals to plan their local actions and become Living Earth Ambassadors. The Soil4Life Manifesto will be at the heart of this (see below). The creation of further Living Earth Ambassadors through the mentorship and by supporting and promoting their local advocacy actions (through social media and LIVE page on the CCIVS website), will consequently engage young people, volunteers and other groups to act on behalf of soil. In other words, The LIVE campaign is the vehicle that CCIVS will use to continue with the advocacy work for the Soil4Life Manifesto so that it can be taken to regional, local, national and international decision makers.

The international advocacy activities, carried on within the sub action B.5.3, allowed to expand and strengthen the soil network at European level, which has made it possible to draw up a Position Paper shared with the member organisations that participated in a first European consultation on the soil directive, spring 2021, and in a second consultation in March 2022. Through the Position Paper, the Soil4Life project has thus contributed to the definition of the new EU Soil Strategy.

Finally, the project Soil4Life foresees the drafting of several documents, as: White Paper and Charter of Principles for Sustainable Use of Soil (action B1); Voluntary Guidelines on soil protection for farmers (action B3) and for professionals (action B4); Municipal Plan for Permeability (action B6); Manifest of young European for soil (action B8), which constitutes long term reference governance tools to reduce soil consumption and to promote the sustainable management of soil.

The White Book on sustainable management of soil provides a general framework on this important and fundamental resource too often forgotten and undervalued within European, national and regional

legislation. The innovative aspect of the White Paper is that it brings together, in one single document, the viewpoints and varying degrees of knowledge of the different actors which deal with these issues, offering the government and the ministries a highly useful tool for sustainable soil management.

The Charter is devoted to the promotion of the sustainable use of soil and land to local administrations, introducing principles for addressing and reducing land degradation and the loss of functions of natural systems. The adoption of this Charter (since the reporting period 9 municipalities and 15 regions have adopted it, see par 6.1.3) will be promoted also after the end of the project and it constitutes a response of the local administrations to confront the environmental, climate and food challenges that are now being debated at EU level (Biodiversity Strategy for 2030, Farm to Fork Strategy, new Soil Thematic Strategy).

The voluntary Guidelines on soil protection for farmers are available on the FAO website (<https://www.fao.org/documents/card/es/c/i6874it>). Moreover, they are available on the *CIA per il suolo* platform, which will be maintained active also after the end of the project.

The voluntary Guidelines on soil protection for professionals was published by INU Edizioni in an e-book format downloadable for free from both the project's and the publisher's websites, being also available after the end of the project. Moreover, the 30th of May 2022 a specific workshop was organised to further spread these Guidelines.

The Municipal Plan for Permeability will provide technical and operating solutions to reduce sealing in the city of Rome. Roma Capitale is even approving an Agreement with Arsial to pursue the activities of data collection on soil permeability and to ensure the update and upgrade of the Permeability Maps and Guidelines.

The Manifest of young Europeans for soil will be spread and promoted through the CCIVS Living Earth Campaign (see previously) in order to support young people and activists to speak out for soil protection and recognition by channelling their energy and enthusiasm to advocate for their own cause and to create an impact. More specifically, the activity foreseen the further development of an advocacy campaign for the CCIVS network to promote the Soil4Life Manifesto and engage young people, through the vehicle of the Living Earth Campaign.

5. Administrative part

The Soil4Life project involved three countries and nine beneficiaries listed below:

Non-profit private organisations	<p>Legambiente onlus (coordinating beneficiary)</p> <p>The Coordinating Committee for International Voluntary Service</p> <p>Udruga Zelena Istria – Green Istria</p>
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Public administrations	Consiglio per la Ricerca in agricoltura e l'analisi dell'Economia Agraria (CREA) Istituto Superiore per la Protezione e la Ricerca Ambientale (ISPRA) Ente Regionale per i Servizi all'Agricoltura e alle Foreste (ERSAF) Politecnico di Milano, Dipartimento di Architettura e Studi Urbani Roma Capitale
Agricultural association	Confederazione Italiana Agricoltori (CIA)

The strong experience acquired over the years by LEGAMB in the role of coordinating beneficiary of LIFE projects has assured the regular progress of the activities and the constant monitoring of deadlines and difficulties. The involvement of NGOs with long time expertise in environmental issues and volunteer involvement (LEGAMB, GI and CCIVS) constituted a valid support particularly for the implementation of the advocacy and communication activities and awareness campaigns. On the other hand, the technical and scientific competence of ISPRA, POLIMI and ERSAF guaranteed that the activities would be carried out following a rigorous and up-to-date scientific approach. Moreover, the institutional role assumed by ISPRA allowed the direct involvement of institutional actors with competence on soil management and protection. Moreover, the presence of ERSAF, together with CIA and CREA, have guaranteed that the achievement of the expected result to improve the agricultural soil management practices happened through the active involvement of farmers. Finally, the involvement of an important public body as ROMCAP in the project staff allowed the opportunity to realise a pilot intervention in the municipalities of Rome, providing a good practice example to be used as a reference point for other similar territorial realities.

Governance of the project was ensured by a solid coordination structure which comprises a **Steering Committee (SC)**, with a role of guidance and control, and an **Executive Committee (EC)** which guaranteed its operation. Both the Committees were composed by representatives of all the partners. Implementation of the individual actions was ensured by specific **Working Groups (WG)**, one for each action) in which the contact persons of the various partners involved participated.

<p>Project Manager: Stefano Di Marco (LEGAMB)</p> <p>Project Coordinator: Chiara Braschi (LEGAMB)</p> <p>Financial Manager: Simone Nardicchia (LEGAMB)</p>

Steering Committee (SC):	Executive Committee (EC):
LEGAMB: Stefano di Marco	LEGAMB: Daniela Sciarra
CCIVS: Victoria Lovelock	(replaced by Chiara Braschi)
CIA: Giuseppe Cornacchia	CCIVS: Victoria Lovelock
(replaced by Fabio Raccosta)	CIA: Giuseppe Cornacchia
CREA: Anna Benedetti	(replaced by Fabio Raccosta)
(replaced by Filiberto Altobelli)	CREA: Anna Benedetti
ERSAF: Stefano Brenna	(replaced by Filiberto Altobelli)
GI: Dušica Radojčić	ERSAF: Lorena Verdelli
ISPRA: Michele Munafò	GI: Dušica Radojčić
POLIMI: Andrea Arcidiacono	ISPRA: Michele Munafò
ROMCAP: Claudio Baffioni	POLIMI: Andrea Arcidiacono
(replaced by Danila Severa)	ROMCAP: Claudio Baffioni
	(replaced by Danila Severa)

The organisation of the project staff is depicted in the organigram below (Fig. 2).

On average a staff meeting between PM, PC, FM and PA took place every week in order to assess the technical development of the project actions and eventual extraordinary intervention needed. Bilateral meeting and/or phone and email contacts among LEGAMB staff and the referents of the project partners occurred regularly.

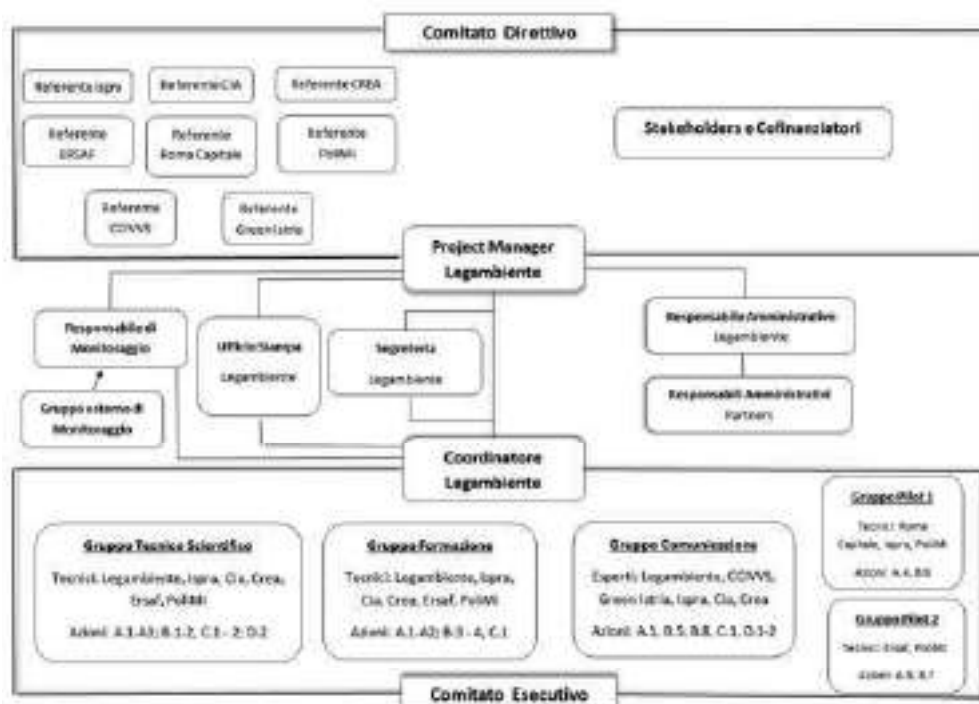


Figure 2: Organigram of the project Soil4Life

The responsible referents for all the associated beneficiaries were identified in the first few months of the project, and for some of them there were some modifications occurred during the project's lifetime, namely:

LEGAMB: the PC was Daniela Sciarra until 31.10.2019, replaced by Chiara Braschi from 01.11.2019

CIA: the PM was Giuseppe Cornacchia until 31.12.2019, replaced by Fabio Raccosta from 01.01.2020

CREA: the PM was Anna Benedetti until 01.02.2020, replaced by Filiberto Altobelli from 07.07.2020.

ROMCAP: the PM was Claudio Baffioni until 31.07.2020, replaced by Danila Severa from 01.08.2020.

The coordinating beneficiary LEGAMB, originally called Legambiente Onlus, changed its name to Legambiente Nazionale APS Onlus on 22.06.2019. However this change did not result in any other administrative change, such as VAT number and bank account. Moreover, the LEGAMB's legal status remained unchanged.

6. Technical part

6.1 Technical progress, per Action

6.1.1 Action A1: Executive Action Plan and research and analysis of best practices

Starting date: 01st October 2019 (as expected)

Ending date: 30th of June 2019 (as expected)

Beneficiary responsible for implementation: LEGAMB

Deliverable/Milestone name		Expected date	Effective Date	Annex
Communication Plan	D	31.03.2019	31.03.2019	See MTR
Executive Action Plan (EAP)	D	31.03.2019	31.03.2019	See MTR
Best Practices Report	D	30.06.2019	30.06.2019	See MTR
First EAP WG's Meeting	M	30.11.2018	15.11.2018	NA
Start of Best Practices research	M	30.11.2018	30.11.2018	NA

This action was concluded as expected and all the foreseen products were delivered in time. An **Executive Action Plan**, a programmatic document describing the implementation of the activities foreseen by the project, their respective deadlines and the expected products to be delivered, was realised by a specific working group (**Executive Action Plan Working Group**) composed by the representatives of all the beneficiaries. Other two working groups (**Communication Working Groups** and **Best Practices Working Groups**) were created in order to draft a **Communication Plan**, a document defining the communication tools and the communication strategy used in the context of the project, and a **Best Practices Report** collecting and analysed 11 best practices regarding as many cases of urban and territorial scale planning studies related to the cases of Bologna, Messina, Padua, Prato, Hamburg, Antwerp, Barcelona, Hanover, Oslo, Stockholm and Vitoria Gasteiz.

6.1.2 Action A2: Adaptation of the tool developed within the LIFE Soil Administration Models 4 Community Profit (SAM4CP LIFE13 ENV/IT/001218)

Starting date: 01st October 2018 (as expected)

Ending date: 30th of April 2020 (expected date 30th of September 2020)

Beneficiary responsible for implementation: ISPRA

Deliverable/Milestone name		Expected date	Effective Date	Annex
Cartography of ecosystem services provided by the soil in the current state of affairs	D	30.06.2019	30.09.2019	MTA1*
Cartography of ecosystem services provided by the soil in the various scenarios hypothesised	D	30.06.2019	09.04.2020	MTA2*
Report on the adaptation of the tool on the municipalities 'territories of Rome and Milan	D	30.09.2019	30.04.2020	See MTR
Starting phase 1: software evaluation	M	31.10.2018	31.10.2018	NA
Starting phase 2: acquisition of input data	M	31.01.2019	31.01.2020	NA
Starting phase 3: tool application in the two municipalities (Rome and Milan)	M	30.04.2019	31.03.2020	NA

*The two maps, already sent together with the Mid Term Report, are newly sent, as requested in the letter of 19 July 2021 following the third monitoring visit

Within this action, some revised models were evaluated in order to be adaptable on two pilot areas. The input data, consisting of local planning, was obtained from ROMCAP and Lombardy Region. With regard to the area of Milan, a regional law on reduction of soil consumption and redevelopment of degraded areas has existed since 2014. So in this case, two different scenarios were assessed to 2030: the first with the application of regulatory tools and a second without it. The addresses established within the city plan of Rome (PRG – Piano Regolatore Generale) were used in the second pilot area. In both cases a **cartography of consumed soil** in the current state (2018) and in the hypothesised scenarios (2030) were evaluated (Annexes MTA1 and MTA2). Starting from the trend 2012-2018, a preliminary assess of economic value on the annual reduction of ecosystem services due to soil consumption was realised for the following ecosystem services: crop production, carbon and wood production (as stocks) and carbon, habitat assessment, pollination, microclimate, wood production, water erosion, water yield, water purification and crop production (as fluxes) .

6.1.3 Action B.1: Awareness Campaign for public administrations

Starting date: 01st of January 2019 (as expected)

Ending date: 11st of March 2022 (expected date 31st of March 2022)

Beneficiary responsible for implementation: ISPRA with the support of LEGAMB and CREA

Deliverable/Milestone name		Expected date	Effective Date	Annex
Charter of principles for sustainable use of soil	D	30.09.2021	13.12.2021	MTA 3

White Paper for the sustainable management of soil	D	31.12.2021	13.12.2021	MTA 4
Start of the consultation board	M	31.01.2019	13.02.2020	NA
National Conference	M	31.12.2021	11.03.2022	NA

This action started as expected and at the end of year 2019 ISPRA held a first meeting with the Conference of Regions and Autonomous Provinces to launch a national technical board between the Conference and SNPA (National System for Environmental Protection), defining a draft Convention on soil consumption issues. This step moved toward a **permanent stakeholder consultation board** establishing a national framework also useful for the Regional Observatory (Action B2) and involving high level decision-makers from the different relevant ministries – MIPAAF (Ministry of Agricultural, Food and Forestry Policies), MITE (Ministry for the Ecological Transition), MIT (Ministry of Sustainable Infrastructures and Mobility), MIBAC (Ministry of Culture), and national institutions - interested in soil resource preservation. Unfortunately, this process was delayed to respect the expected deadline (31.01.2019) mainly due to the frequent difficulties existing in the dialogue between national institutions, and the permanent consultation board was officially recognized on 13.02.2020 through a **Ministerial Decree**. This national legal tool was not considered in the project proposal but it will constitute a strong impulse to national policy on soil consumption prevention and land restoration. The two deliverables of this action (the **Charter of Principles for Sustainable Soil Use**, Annex MTA3, and the **White Paper**, Annex MTA4) were drafted with the contribution of different partners under the umbrella of ISPRA. In particular, the White Paper, addressed to Italian ministries, contains a general framework on soil function and ecosystem and the main threats affecting soil. Afterward, the document takes into account the issues mostly considered within the project: organic carbon decline and land consumption with a focus on current national and EU legislation relating to soil matter. On the other hand, the national Charter of Principles for Sustainable Soil Use, addressed to local administrations such as Regions, Provinces and Municipalities, promotes the goal of sustainable land use as a crucial condition for interaction between human activities and natural ecosystems. It consists of five key principles and 11 priority targets to promote sustainable soil use. These two documents represent a first step in paving the way for the national institutions to develop legislation on soil protection.

During the project's lifespan, the Charter was adopted by **24 local authorities from Municipalities (9) and Regions (15)**, more than the 12 expected by the project's proposal (Tab. 1). All the regions adhering to the Charter have declared their adhesion during a plenary meeting which took place on 13.12.2021 involving the representatives of the Regional Observatories (see next par 6.1.5, action B2).

MUNICIPALITY (M)/REGION (R)		DATE OF ADHESION
Bioglio	M	11.03.2022
Cantalupo in Sabina	M	28.03.2022
Casperia	M	28.03.2022
Cittaducale	M	18.03.2022

Otricoli	M	29.03.2022
Pineto	M	22.03.2022
Poggio Mirteto	M	23.03.2022
Ponzano Romano	M	29.03.2022
Pray	M	25.03.2022
Autonomous province of Bolzano	R	13.12.2021
Campania	R	13.12.2021
Emilia Romagna	R	13.12.2021
Friuli-Venezia-Giulia	R	13.12.2021
Lazio	R	13.12.2021
Lombardia	R	13.12.2021
Piemonte	R	13.12.2021
Puglia	R	13.12.2021
Sardegna	R	13.12.2021
Sicilia	R	13.12.2021
Toscana	R	13.12.2021
Autonomous province of Trento	R	13.12.2021
Umbria	R	13.12.2021
Valle d'Aosta	R	13.12.2021
Veneto	R	13.12.2021

Table 1: List of municipalities/region adhering to the Charter of Principles for Sustainable Soil Use

Moreover, the after LIFE activity for the promotion of the Charter of Principles for Sustainable Soil Use has already started and **14 other municipalities**, including **the municipality of Rome**, have already adhered to the Charter through an official declaration.

On the 11th of March 2022, on the occasion of the Soil Festival organised within the action B3 (see par 6.1.5), a national conference was organised and the White Paper and the Charter of Principles for Sustainable Soil Use were officially presented.

Moreover, as part of action B.1 and in order to promote the tool developed within the LIFE SAM4CP project to support decisions for the evaluation of costs for ecosystem services, CREA has conducted methodological investigations on specific aspects, in order to improve the ecosystemic service of the soil relating to agricultural production in irrigated environments, useful and strategic to its better definition. In this case, the economic resources not used due to the pandemic were used. In this context, CREA coordinated and carried out an activity aimed at improving the methodology for estimating a fundamental ecosystem service, that of agricultural production. Methodological

guidelines were therefore obtained for identifying the most appropriate methodology for defining the ecosystemic value of the soil relating to agricultural production, in an irrigated environment in a specific area of the Lazio region, which is strategic for agriculture in an urban and peri-urban context. This activity, not foreseen in the project proposal, was carried out in collaboration with two departments of the Tuscia University: DAGRI and DIBAF.

DAGRI carries out research in the fields of agronomy, soil management and sustainability of production processes. DAGRI's activity was aimed at collecting agronomic data, analysing them and highlighting the results. The activity with the DIBAF was focused on the characterization of soils, in the various agro-ecosystemic environments, in order to accurately identify guidelines for the assessment of ecosystem services of soils, in particular with regard to the ecosystem service of agricultural production and concrete actions for their management. The activities of the DIBAF were aimed at collecting soil data, analysing them and highlighting the results.

The aforementioned activities were mainly conducted in the pilot area of Rome, where guidelines were defined for the definition of a minimum dataset useful for simulating the ecosystem service of agricultural production on a local and regional scale. This activity, in line with the activities envisaged in action B1, had the purpose of improving the economic evaluation of the ecosystem service, in order to prove to be a useful tool in the various scenarios of land use that can be hypothesised in territorial planning.

6.1.4 Action B.2: Regional Observatories on soil consumption

Starting date: 01st of January 2019 (as expected)

Ending date: 31st of March 2022 (expected date 31st of December 2021)

Beneficiary responsible for implementation: ISPRA

Deliverable/Milestone name		Expected date	Effective Date	Annex
Start of collegial meetings with regions/ ARPA	M	30.04.2019	30.04.2019	NA
Constitution of regional observatories	M	30.06.2021	07.12.2021	NA

This action started as scheduled and in mid-April 2019 a preliminary web conference was organised with SNPA (ARPA and APPA). In the following years, several meetings were realised, both in person and remotely (due to the Covid-19 pandemic emergency), in different regional offices. More precisely, **more than 60 meetings** took place during the reporting period, **involving 15 Regions/Autonomous Provinces**, five more than expected by the project. As well as the Regional Agencies, the technical regional offices took part in the meeting with the participation of all interested areas including environmental, landscape and soil protection, agriculture and forest, urban planning, cultural heritage and, in some cases, the Regional Agencies for the agriculture development. The topic of the meetings concerned the sharing of Observatories objectives, the national framework at national level for soil consumption monitoring by ISPRA/SNPA, the regional legislation concerning soil protection including measures aiming to reduce and mitigate soil sealing, the selection of best indicators useful to regional context, etc. Most meetings had on average 10-12 people in attendance. This activity leads to the institution of **15 Regional Observatories**, 5 more than expected in the project proposal (see Tab 2).

REGION	DATE OF INSTITUTION
Autonomous province of Bolzano	01.10.2021
Campania	05.10.2021
Emilia Romagna	24.09.2021
Friuli Venezia Giulia	22.09.2021, 28.09.2021
Lazio	28.09.2021
Lombardia	27.09.2021, 30.09.2021, 15.11.2021
Piemonte	24.10.2021, 15.10.2021
Puglia	05.10.2021, 06.10.2021
Sardegna	24.10.2021, 06.10.2021
Sicilia	28.09.2021, 08.10.2021
Toscana	06.10.2021
Autonomous province of Trento	22.09.2021
Umbria	27.09.2021

Valle d'Aosta	30.09.2021, 11.04.2022 (<i>Delibera di Giunta Regionale – DGR 384</i>)
Veneto	22.09.2021

Table 2: Date of institution of the regional Observatories

The action was not strongly affected by the health crisis since during the lockdown period the summit improved through virtual communication. The first of April 2021 a web-conference has been organised with 107 participants coming from ARPAs/APPAs and regional departments. The results of these growing Observatories were published in the annual report on soil consumption edited by ISPRA/SNPA on July 2021.

During a **plenary meeting** which took place on 13.12.2021, all the instituted 15 Regional Observatories have adopted the Charter of principles for sustainable use of soil (see previous par 6.1.4, action B1).

6.1.5 Action B.3: Awareness Campaign for farmers

Starting date: 01st of January 2019 (as expected)

Ending date: 11th of March 2022 (expected date 31st of March 2022)

Beneficiary responsible for implementation: CIA in collaboration with CREA and ERSAP

Deliverable/Milestone name		Expected date	Effective Date	Annex
FAO VGSSM (translation in Italian)	D	31.12.2018	31.12.2018	See MTR
Voluntary guidelines for farmers	D	30.06.2019	31.10.2019	See MTR
Brochure	D	30.09.2019	30.09.2019	See MTR
Leaflet	D	30.09.2019	31.10.2019	See MTR
LLGG application form	D	30.09.2019	31.10.2019	See MTR
Final Report on training activities	D	31.10.2021	31.03.2022	MTA 5
First Forum	M	30.04.2019	07.05.2019	NA
First training course	M	30.09.2019	25.11.2019	NA

First Seminary*	M	31.01.2020	01.11.2020*	NA
Soil Festival	M	31.10.2020	09-10.03.2022	NA
Final Seminary	M	31.03.2022	11.03.2022	NA

*This milestone was modified. See below for further details

The action B3, coordinated by CIA in collaboration with CREA and ERSAF, started as scheduled and during the first two months the program of the activities to be implemented was defined. In December 2018, CREA dealt with translating in Italian the FAO **Voluntary Guidelines for Sustainable Soil Management** (LLGG VGSSM), being Italian the 10th language in which people can have direct access to information provided through this document. The LLGG were uploaded on the [FAO website](#), being available for free, and they were officially presented in Rome, *Città dell'Altra Economia*, on the 6th of December 2019 (*"Un suolo per la vita", Isola della Sostenibilità*). Mr Eduardo Mansur, Director of the Office of Climate Change, Biodiversity and Environment at FAO participated at the event. On this occasion, several activities addressed to students were carried on by the representatives of CIA and CREA..

Starting from the LLGG VGSSM, CIA developed a new document specifically adapted to sectorial specificities and composed by **13 forms**, which was printed in 10.000 copies. The aim of this new document was making the guidelines more relatable to respect to the Italian agricultural realities. One brochure (6.000 copies), a specific leaflet (10.000 copies), one poster (3.000 copies) and the application form to comply with the voluntary guidelines for farmers (10.000 copies) were also developed, printed and distributed on the occasion of public events.

The training activity addressed to CIA technicians was successfully concluded (see Annex MTA5), and the following meetings were realised:

3 Informative Forums (Rome, 07.05; 18.07; 19.09.2019) addressed to local CIA offices and aimed at informing CIA officials on the project purposes and finalities as well as on the contents of the voluntary guidelines for farmers. **35 CIA officials** attended the three Forums

3 Training courses (Rome, 25-26.11.2019; Milan 10-11.02.2020; Rome 17-18.02.2020) addressed to CIA technicians to promote the voluntary guidelines and the application of sustainable management techniques for agricultural lands, in order to enhance the role of farmers on soil conservation. **43 CIA technicians** were trained. The implementation of three training courses was supported by CREA and ERSAF who collaborated also arranging some lectures involving their experts. The topics discussed during the training courses were: Sustainable fertilisation, Soil and the CAP, Objectives, indicators and tools, Innovation on sustainable agronomic management, Soil tested by the media, between farmers and consumers.

1 In-depth remote meeting (24.04.2020) in collaboration with CREA. **38 CIA technicians attended the meeting**

The first of 40 expected seminars addressed to farmers was planned to start in mid-March 2020 in Viterbo with the involvement of young farmers. Due to Covid-19 circumstances, this meeting was cancelled and the limitations due to the sanitary emergency have made it impossible to plan other in person meetings in the following months. Given this critical situation, the 40 training courses were substituted by a remote video platform (*CIA per il suolo - CIA for the soil*, website: <https://www.ciaperilsuolo.it/>), including documents, videos and technical forms and to which farmers can have access through the filling in of an online registration form. The platform allowed us to go

forward with the informative activities and it had the added value to reach more farmers than expected and to provide an informative product being available also after the end of the project. At the end of the online courses, farmers have received the assignment of “Soil Custodian”. During the project’s implementation, **more than 7.500 farmers were involved, with 884 of them becoming “Custodians of the Soil”**. The 30 videos uploaded in the platform were centred on the 13 forms basic topics, plus a new form on sustainability and CAP, reaching an overall number of **14 available forms**. The 43 technicians trained during the training courses were involved in the realisation of the videos, each for their own specific areas of expertise. Moreover, the representatives of some LIFE projects also have contributed to the realisation of informative materials (videos and documents), thus becoming the platform an opportunity for networking activity with these projects. More precisely, such contributions were provided by LIFE HelpSoil (LIFE12 ENV/IT/000578), LIFE Chimera (LIFE15 ENV/IT/00063) and LIFE Porem (LIFE17 ENV/IT/333). The experts of CREA and ERSAP were also involved in the platform elaboration. The access link to the platform was published on the Soil4Life project’s website and it was also promoted through the CIA website and social media. Some associations loyal to the CIA (i.e AGIA and ANABIO) also contributed to promote the platform’s link on their websites and social channels. Moreover, the top management of the two organisations took charge of the dissemination of the themes of the Soil4Life project at their entrepreneurial base as evidenced by the statements of the associations. A specific **catalogue** was drafted including the list of videos available on the platform (Annex ATA1).

Moreover, a **monthly newsletter** was created including articles drafted by the CIA’s technical staff. The newsletter, which was not foreseen in the project proposal, was an adjunctive way to promote and disseminate the LLGG VGSSM. During the project lifetime, **11 issues of the CIA newsletter** were published and sent to an average of **more than 8.000 farmers** for each issue, creating a kind of “digital project community”. This community showed a strong interest in the project topics, and of the 80.352 emails sent in a year, we received only 42 cancellation requests (see following table, Tab 3).




NEWSLETTER ISSUE	N° OF CONTACTS TO WHICH THE EMAIL WAS SENT	IMMEDIATE CANCELLATION REQUESTS OR SPAM FLAGGING	CANCELLATION REQUESTS SUBSEQUENT NEWSLETTER READING
N. 1 JANUARY 2021	4.176	NA	0
N. 2 FEBRUARY 2021	2.378	6	0
N. 3 MARCH 2021	1.953+3.092* = 5.045	0	3
N. 4 APRIL 2021	4.918	0	3
N. 5 MAY 2021	7.504	0	2
N. 6 JUNE 2021	7.362	0	4
N. 7 JULY 2021	7.295	0	7
N. 8 SEPTEMBER 2021	7.281	0	6
N. 9 OCTOBER 2021	12.868	0	4
N. 10 NOVEMBER 2021	12.855	0	1
N. 11 DECEMBER 2021	12.846	0	6

TOTAL			
11 NEWSLETTER	80.352	6	36

Table 3: Data analysis related to the Newsletters

* Sent in two subsequent dates

Four “Soil Days” remote events addressed to farmers to learn about good practices on soil management that have already been tested were realised by the CIA. **Two more “Soil Days”** were organised by CREA and ERSAF. The list of all the “Soil days” events are reported in the table below (Tab 4). The first of these “Soil Days”, which was called **“LIFE Day”**, was also an opportunity to carry on a networking activity with other 8 european projects (see par 6.1.14 for further details).

DATE	TITLE	RESPONSIBLE PARTNER	
11.06.2021	<u>“LIFE Day”</u>	CIA	
08.07.2021	<u>Farming on the Stretto-From the South, soil protection and a bridge with Europe</u>	CIA	
08.09.2021	<u>Farming in the Cuneo province between tradition and innovation to preserve the soil resource</u>	CIA	

16.09.2021	The CAP for a sustainable soil utilisation	CREA	
20.09.2021	Soil and the potential quality farming models	CIA	
27.09.2021	Agricultural soils in the Lombardy region	ERSAF	

Table 4: “Soil days” realised during the project lifespan

Due to restrictions caused by the sanitary emergency, the **Soil Festival** took place later than expected (March 2022 instead of October 2021) and it was organised as a remote event. Notwithstanding this, all the expected activities (i.e theatre show, music concert, direct participation of farmers, through the network of CIA "Agrichefs") were carried out. The Soil Festival was organised by CIA thanks to the collaboration of CREA, ERSAF and ISPRA. The program of the Soil Festival is annexed (Annex ATA2) and all the Soil Festival events are available on the platform [CIA per il suolo](#).

The **Final Seminary** of action B.3 took place on 11 March 2022. The entire registration of the event is available on the page <https://www.ciaperilsuolo.it/il-progetto/>. At the same link, all the products produced by CIA as well as activities implemented within the action B3 are also availables.

6.1.6 Action B.4: Awareness Campaign aimed at technicians and professionals

Starting date: 01st of January 2019 (as expected)

Ending date: 30 of October 2021 (expected date 31st of March 2022)

Beneficiary responsible for implementation: POLIMI in collaboration with ISPRA and LEGAMB

Deliverable/Milestone name		Expected date	Effective Date	Annex
Voluntary LLGG for professionals	D	30.06.2019	30.04.2020	MTA6
Teaching program	D	30.06.2019	30.04.2020	See MTR
Forum for the sustainable Soil management	M	31.01.2019	12.12.2019	NA
Training activities for professionals	M	31.10.2019	09.02.2021	NA

*updated version of the Voluntary LLGG for professionals

The Action B4 is divided into two sub-actions that are strictly related to each other.

Sub-action B4.1 aims at defining the **Voluntary Guidelines on soil protection for professionals** through the activation of a **participatory process** (Forum) involving the representatives from different areas of expertise (Fig. 3). Starting from the establishment of a working group involving representatives from RPT - the Technical Professional Network - a wider meeting has been organised in order to discuss and implement the first draft of the document. The **Forum for Sustainable Soil management**, a daytime debate that took place on 12 December 2019 in Rome at ISPRA's office. **More than 40 professionals and experts** attended the Forum and they actively participated and contributed in defining the structure and the contents of the guidelines. The Forum was an important opportunity to identify the themes, questions and indications key to defining and drawing up the guidelines. This event was followed up in the following months through the gathering, exchanging and organising of the contributions from all the participants which went into compiling the final version. Moreover, a questionnaire has been provided to all participants in order to allow them to send their contribution even after the debate. The final version of the document, including all the contributions collected until the end of January 2020, has been extensively reviewed also by ERSAP and it was delivered on 30 April 2020. The Voluntary Guidelines for a Sustainable Soil Use for Technical Professions was published by *INU Edizioni* in an **e-book format** downloadable for free from both the project's and the publisher's websites (Annex MTA 6). Moreover, a hardcopy version was also made available, with 100 copies printed to be distributed during the physical events.

A key element that led to the production of the voluntary guidelines was the contribution of all the participants at the forum who, at different moments and in different ways, made their competences from their respective disciplinary spheres available, providing methodological indications and technical-scientific contributions that allowed for drawing up a paper that was as complete and multi-disciplinary as possible. Moreover, the choice to publish the guidelines with INU Edizioni making for a free download from the publisher's website, as well as the project's website, contributed to giving a major visibility to the paper, and will also do so even after the activities of the project's actions have finished.



Figure 3: People participating in the Forum on Sustainable Soil

Sub-action B4.2 aims at disseminating the Voluntary Guidelines by means of professional training courses with the provision of Professional Training Credits.

The action B4 relies on **cooperation with the Technical Professional Network (RPT)**. A RPT working group, including representatives from seven different Professional Associations (agronomists, architects, chemists, engineers, industrial engineers, geologists and geometers), has been established and involved in both sub-actions activities. From October to December 2019, several meetings with the RPT working group were arranged as preparatory activities to organise the Forum for the sustainable Soil management (see before). The necessary bureaucratic steps to formalise the RPT working group establishment determined a slight delay in the activation of the participatory process. Notwithstanding this, the teaching programme was defined on 30 April 2020 while a preliminary teaching course was released in Rome, for engineers only, in early 2019.

The training programme consisted of 3 types of events:

- **a cycle of 4 meetings of 2 hours each** free on live webinar (synchronous distance training), and then later repeated twice in recorded form (synchronous distance training with material uploading outside live session, Fig. 4). These meetings were aimed at presenting the guidelines over 4 thematic days, each day dedicated to studying in more detail the contents of a specific section, with presentations from the project partners and representatives from the professional worlds. The training cycle participants had the possibility to adhere voluntarily to the guidelines as a concrete signal of their sharing the goals, of the cultural lines and the operative strategies promoted by the project;
- **an asynchronous version of the same training cycle**, adapted as an e-learning course of 8 hours long, was made available on the professional Associations e-learning platforms starting from the end of October 2021 for at least 1 year. Even in this case the participants have the possibility to adhere voluntarily to the guidelines through an online questionnaire.

- **a final 4-hour hybrid seminar** (physical and webinar). Besides presenting the voluntary guidelines, this meeting provided an opportunity for exchanging information with the world of professionals, and also for sharing the outcomes of other European projects that had dealt with or are dealing with similar issues.



Figure 4: The program of the training course

With the initial target of the action foreseeing the voluntary signing of the guidelines of 600/800 professionals, the organisation of the 3 cycles of training meetings and the asynchronous version carried out in the above-mentioned way witnessed the participation of about **7.800 professionals** with **more than 3,000 signing it**. To this, there should also be added the results which will come from the asynchronous course still available at least until the end of 2022.

The organisation of the training courses received excellent feedback from the participants, both in terms of interest in the issues dealt with and in the way they were conducted, as can be seen in the findings from the evaluation questionnaire filled in by a sample of **4,000 registered participants** regarding the course quality.

Moreover, it is believed that the choice to involve the national professional associations and not the single provincial bodies contributed to increasing the visibility of the project's activities and better reaching the different situations nationwide, also including professional categories that were not originally foreseen.

In general, in organising such a complex initiative, the collaboration with the professional associations revealed to be highly important, both in being able to reach such a high number of users, and also in the managing of the technical and procedural aspects.

The possibility to see recognised and accredited trained professionals after their participation in the training activities was certainly an important pull factor for the professionals. As well, working with the national councils in promoting the training courses for their respective members gave a high visibility to the activities of Action B4 and the project, in general.

Finally, the technical support provided by the associations was a key element in the organisation of the online events, the only practical alternative due to the restrictions imposed by the health emergency. In particular, the contribution of the national councils was key to making virtual classrooms available on the platform GoToWebinar, managing the registrations and the organisation of the events, checking on the presence for the recognition of credits and the distribution of the course evaluation questionnaires – making it possible to collect the professionals’ voluntary adhesions to the guidelines –, as well as in managing the video recordings of the training days, organising the deferred on air recordings and the post-production work necessary for the FAD asincrona which will allow for being able to further exploit the course, even after the project’s activities have ended.

6.1.7 Action B5: National and International Campaigns for citizens

Starting date: 26th November 2019 (as expected)

Ending date: 10th of March 2022 (expected date 31st of March 2022)

Beneficiary responsible for implementation: LEGAMB

Deliverable/Milestone name		Expected date	Effective Date	Annex
Guide for teachers	D	31.07.2019	31.07.2019	See MTR
Final dossier (Position Paper)	D	28.02.2022	10.03.2022	MTA 7
Contest 1 st edition	M	30.09.2019	16.01.2020	NA
First seminar for teachers	M	30.09.2019	06.11.2020	NA
First scientific Conference	M	31.03.2020	04.12.2020	NA
First international Seminar	M	30.04.2020	10.06.2020	NA
First international Forum	M	31.10.2020	10.11.2020	NA
International Conference on sustainable use of soil	M	31.03.2022	29.03.2022	NA

This action is subdivided into three sub actions, one for each targeted stakeholder

Sub-action B5.1 Initiatives addressed to the general public: During the project lifespan, three conferences addressed to general public were realised as follow:

1. **Remote meeting: “Un Green Deal per il suolo europeo”** which took place on the 4th of December 2020 (Fig. 5). The meeting was facilitated by **Filippo Solibello** radio RAI, with the participation of **Damiano Di Simine**, Legambiente, scientific responsible Soil4Life project, **Mirco Barbero**, European Commission, **Alberto Orgiazzi**, Joint Research Center, Ispra (VA), **Michele Munafò**, ISPRA, **Loredana Canfora**, CREA Agriculture and Environment, **Aldo Dal Prà**, CRPA, representative of the two LIFE projects AgriCOlture and Forage4Climate. A total of **70 people** attended the meeting.



Figure 5: “Save the date” of the event “*Un Green Deal per il suolo europeo*”

2. **In person meeting “From Soil to Fork”** which took place on the 29th of September 2021 in Milan (Fig. 6). This meeting was an opportunity to exchange views on the relations between the soil, food policies and climate change. The exchange involved exponents from different situations - *Associazione Mercato di Cittadinanza*, *CCIVS*, *ISPRA*, *Legambiente*, *Lipu*, *Mani Tese* - who presented their points of view, their experiences and their specific competences regarding this complex issue. The event was held in *Cascina Nascosta*, a farmhouse in a park in the city centre that offers facilities and catering for events focusing on sustainable food choices. At the end of the meeting, the participants were offered a lunch prepared according to planetary diet guidelines, being able to test firsthand the issues dealt with during the morning. A total of **33 people** participated in the meeting.



Figure 6: People attending the meeting “From soil to Fork”

3. **Remote meeting:** “*Il suolo è vita: come tutelarlo?*” which took place on the 10th of March 2022 (Fig. 7). The meeting was facilitated by **Francesco Loiacono** *La Nuova Ecologia* newspaper with the participation of **Stefano Ciafani**, president of Legambiente, **Mario Tozzi**, geologist and scientific communicator, **Michele Munafò**, ISPRA, **Valerio Rossi Albertini**, physicist and scientific communicator and the professor Chiara Mazzoleni from the University of Venezia. A total of **895 people** attended the meeting



Figure 7: “Save the date” of the event “*Il suolo è vita, come tutelarlo?*”

Sub-action B5.2 Initiatives addressed to students: This sub-action started regularly and all the expected products (**specific guide for teachers**, 500 copies printed, and one **edu-kit on soil**

protection for students downloadable from the project's website (https://soil4life.eu/wp/wp-content/uploads/2020/01/Kit-informativo-contest-scuole-2020_compressed.pdf) were realised. The implementation of the edu-kit allowed us to start a networking activity with the LIFE Project SOS4Life, sharing the approach, contents and methodology used by the two LIFE projects in producing the edu-kit. Four meetings (April, July, September and December 2019) took place between the representatives of LEGAMB and CREA in order to define the details and the regulation of the contest addressed to students. The **first edition of the contest** (addressed to students of the high school) was launched on 27.01.2020 (<https://www.legambiente.it/soil4life-il-progetto-europeo-per-la-salvaguardia-del-suolo-approda-nelle-scuole/>). Unfortunately, the closure of the schools has meant that we had to cancel this first edition of the contest. The **second edition of the contest** was launched on 27.01.2020 (<https://soil4life.eu/news/il-suolo-a-scuola-arriva-il-contest-promosso-da-legambiente-e-crea/>) and it was addressed to students of both high and primary schools. A total of **56 classes** were involved and **18 classes (around 450 students)** participated in the contest. **Three of them** were selected as winners and remotely awarded by a specific jury with materials and/or equipment, as requested by the winning schools. Moreover, **two special mentions** were assigned for granting two particularly deserving works. Between November 2020 and February 2021, **three online seminars** addressed to teachers were carried on, involving **61 teachers**. Moreover, a **final webinar** took place on the 29th of January 2021 to discuss the theme of landscape protection, as a strategic, limited and non-renewable resource (<https://soil4life.eu/news/campagna-educativa-scienza-ecco-il-webinar-la-tutela-del-paesaggio/>). During the webinar, the main European and Italian regulations on soil protection were analysed. This webinar was attended by a total of **90 teachers**.

Finally, an “**open-lesson**” on soil and its protection was carried out on the 28th of March 2022 by the representatives of CREA to the students of the agricultural Institute “*Emilio Sereni*” in Rome (Fig. 8).



Figure 8: CREA representatives have encountered the students of the agricultural Institute “*Emilio Sereni*”

Sub-action B5.3 Advocacy activities at national and international level:

With regard to national and international information, awareness and advocacy campaign for citizens and civil society organisations to promote the adoption of soil protection measures by European policy makers, the following activities were implemented:

- **3 Preparatory Seminars (10.06.2020, 10.09.2020, 05.03.2021) involving 167 people**
- **4 International Forums in 4 different countries (Croatia 10.11.2020, Greece 08.06.2021, Spain 25.01.2021, Germany 14.01.2022) involving 700 people**
- **1 Final Conference (10.03.2022) involving 174 people**

Those initiatives have involved several environmental NGOs. Some of them had already successfully carried out LIFE projects dealing with issues related to the soil and remained active in raising awareness of soil conservation, members of scientific and academic world and local and regional bodies and public administration agencies of member states responsible for establishing soil protection policies. Due to restrictions subsequent to Covid-19 circumstances, all these meetings were carried on remotely.

The 4 Forums were organised through specific agreements with local organisations (providing them with a budget for the event) that were responsible for the logistics, including invitation of local stakeholders, selection of speakers and promotion of the event. In Croatia we have organised the event with ODRAZ; in Greece with Naturefriends Greece, in Spain/ Catalunya with Xarxa per la Conservació de la Natura - XCN; in Germany with Slow Food Germany and the World Food Institute. One of the preparatory seminars and the final conference were organised together with The European Environmental Bureau, the biggest network of environmental organisations in the EU. Locally recognized organisations provided the network of local contact and high participation. Members of the network created through the national forums have shown interest for the follow-up activities.

The 3 preparatory seminars had mainly the purpose of defining the specific form of the forums and drawing up a Position Paper draft that was used in the national meetings. The 4 forums were opportunities for the dissemination and advocacy of the Position Paper content, as well as the adaptation of the content to the different and specific biogeographical contexts, referring to the problems of land degradation, priority or emerging, at macro-regional level.

The proposals emerging throughout the forums were gathered into a final version of the **Position Paper** (Annex MTA7) that was presented at a final international seminar where also the relevant DGs participated and was held on 10 March 2022. During the project lifetime, a network of 800 people/contacts including CSOs, institutions, research institutions and citizens from 39 Countries, mainly from the EU, was created and **33 European Associations** signed the Final Position Paper:

1. Alpe Adria Green
2. Asociación Reforesta
3. Associazione Terra
4. Bio Hoefe Stiftung.
5. BUND
6. CCIVS
7. CEEWEB for Biodiversity
8. Deutscher Naturschutzring
9. ECBPI European Circular Bioeconomy Policy Initiative
10. Ecological Society of Heraklion
11. ELSA European Land and Soil Alliance
12. European Environmental Bureau
13. FAI-Fondo per l'Ambiente Italiano.
14. Fondazione Medes
15. France Nature Environnement
16. German Soil Association (Bundesverband Boden e.V.)
17. INNU
18. Institute for Soil Conservation and Sustainable Agriculture,
19. Inter-Environnement Wallonie (Belgium)

20. Legambiente
21. NABU
22. Nature Friends Greece
23. Naturpunt
24. Re Soil Foundation
25. REsilienceLAB,
26. REVER, the French network for Ecological Restoration, affiliated with SER-Europe
27. Slow Food europa
28. Society for Ecological Restoration
29. Soil4Life
30. WWF Spain.
31. Xcn
32. Zelena Istria
33. Cospe

The forums and seminars saw a great deal of participation, reaching **more than 1000 people**, also giving the opportunity to address the issue of soil even to organisations from countries where it is scarcely covered. Through this action, the network dedicated to soil has been expanded and strengthened, which has made it possible to draw up a Position Paper shared with the member organisations that participated in a first European consultation on the soil directive, spring 2021, and in a second consultation in March 2022.

6.1.8 Action B6: Pilot 1: Mitigation/reduction of soil sealing in the municipality of Rome

Starting date: 1st of January 2019 (as expected)

Ending date: 31st of March 2022 (as expected)

Beneficiary responsible for implementation: ROMCAP

Deliverable/Milestone name		Expected date	Effective Date	Annex
Permeability Map for the municipality of Rome	D	30.09.2019	31.12.2019	See MTR
Guidelines for Urban Planning	D	31.10.2021	31.03.2022	MTA 8
Permeability Plan	D	31.12.2021	31.03.2022	MTA 9
New building regulation for the municipality of Rome*	D	31.12.2021	28.09.2021	MTA 10
Start of existing data/documents collection	M	31.10.2018	15.01.2019	NA
Database	M	30.11.2018	30.11.2019	NA

Constitution of the office devoted to soil protection	M	30.09.2019	05.12.2019	NA
Future building regulation for the municipality of Rome approved**	M	31.03.2022	28.09.2021	NA

*This deliverable was modified. See below for further details

**This milestone was modified. See below for further details

This action is subdivided into four sub-actions:

Sub-action B.6.1. Data collection for the realisation of the *Pilot* in the municipality of Rome and establishment of the Special Soil Protection Office. The first documentary survey of the territory of the Municipality of Rome was carried on by the Technical Offices of the Municipal Administration, Universities and Research Institutes at the very beginning of the project. Data collected was included into the NIC (New Cartographic Infrastructure) by the staff of the Technological Department of the Municipality of Rome, and a new “Geoportale” was developed. On occasion of the World Soil Day (5th of December) a **Special Soil Protection Office** was instituted through the reorganisation of the offices within the Environmental Protection Department (*Determinazione Dirigenziale n. 1536 del 05.12.2019*) in order to support the preparation of the Permeability Plan. At the end of the project, the Soil Protection Office will follow the Office’s implementation, thus ensuring the continuation of the activities started with the LIFE project.

Sub-action B.6.2 Recognition of the best techniques/solutions to increase soil permeability. POLIMI together with ROMACAP and ISPRA completed the **Guidelines for Urban Planning** (Annex MTA8) including the “**Urban Resilience Design Strategies**”. This study on the Roman area and its master plan aims to collect the best design techniques and solutions to increase soil permeability and to improve urban resilience in the Roma Capitale area. The main purpose of the document is to identify nature-based design solutions and strategies to address 4 major challenges of climate change and related risks, which are the urban and coastal flooding, the urban heat island effect, the biodiversity loss and the atmospheric pollution. The four challenges are addressed throughout the document starting from the analysis of the Roman urban context as an emblematic case for the identification of themes and problems (chapters 1 and 2), while chapters 4, 5 and 6 identify design strategies and solutions that could also be applied to a wider context. The Guidelines provide technical and operating solutions to reduce sealing suitable for even other Italian or European cities dealing with the same problems or requirements. It also aims to provide planning indications for the implementation of the future urban Building Regulation.

Sub-action B.6.3 Realisation of a Municipal Permeability Plan. The Soil Permeability Map for the Municipality of Rome has been completed on the basis of the assessment and analysis of data collected. These data gave rise to **3 different Soil Permeability Maps** and to the Suitability for Enhancement of Effective Infiltration Map, important instruments for urban planning. Roma Capitale is even approving an Agreement with Arsial to pursue the activities of data collection and to ensure the update and upgrade of Maps and Guidelines. The “Implementing Guidelines for the implementation of the Permeability Plan” have been drawn up, and this document completes the **Municipal Permeability Plan**, together with the 3 Soil Permeability Maps and the Suitability for Enhancement of Effective Infiltration Map (Annex MTA9). This document aims to reconstruct the regulatory and programmatic framework at European, national, regional and local level relating to the

issue of soil sealing in order to define strategic actions and guidelines to address the drafting of the urban permeability plan and the building regulations of the city.

Sub-action B.6.4 Proposal for the new Building regulation of the Municipality of Rome. The approval of the Building Regulations is subject to the approval of the Standard Building Regulations by the Regional administration. ROMCAP is waiting for the activation of the Italian platform where it will be possible to fill in the Roman RET (*Regolamento Edilizio Tipo*, which constitutes the Standard Building Regulations). The action resulted in an act of commitment by the administration to include the general principles and indications provided by the Municipality Permeability Map, as well as by the Guidelines. These Guidelines have been developed during the elaboration of the Permeability Plan, in one of the chapters of the future Building Regulation. This act of commitment was formalised through a **Municipal Council Resolution** (DCG n.233 of 28.09.2021, MTA10) stating that the guidelines will be included in the future Building Regulation of the Municipality of Rome. Consequently, the milestone “New building regulation for the municipality of Rome” was substituted with “Municipal Council Resolution” and the milestone “Future building regulation for the municipality of Rome approved” was modified as “Municipal Council Resolution deliberated”.

6.1.9 Action B7: Pilot 2: Maintenance of organic matrix in agricultural soils in Lombardy region

Starting date: 1st of October 2018 (as expected)

Ending date: 30.11.2021 (expected date 31st of March 2022)

Beneficiary responsible for implementation: ERSAF

Deliverable/Milestone name		Expected date	Effective Date	Annex
Report on Good Practices on the Use of Biomasses as Soil Conditioners	D	30.06.2019	30.06.2019	See MTR
Cartography of Organic Carbon in Soil and Cartography of Agriculture and Extra-Agricultural Biomasses	D	30.06.2019	30.06.2019	See MTR
Report on the State of the Art for the Management of Waste Biomasses with Reference to the Situation in Lombardy	D	30.06.2019	30.06.2019	See MTR
Model of integrated management plan for farms	D	30.06.2020	30.09.2020	MTA 11
Technical recommendations	D	30.09.2021	30.11.2021	MTA 12

Start of research and collection of existing data/documents	M	30.11.2018	30.11.2018	NA
Implementation of the documentary and bibliographic archive	M	31.01.2019	31.01.2019	NA
End of the first campaign on collection of agro-environmental indicators	M	30.11.2019	30.11.2019	NA
Starting of stakeholders board	M	31.01.2020	31.01.2020	NA
Technical seminar	M	30.04.2021	09.11.2021	NA

This action was split into two sub-actions and it ended as scheduled.

The sub-action B7.1, which was propaedeutic to the second one, ended in June 2019, fulfilling the deadline established by the project, with the completion of all of the expected deliverables: the **Report on Good Practices on the Use of Biomasses as Soil Conditioners** and the **Report on the State of the Art for the Management of Waste Biomasses** with Reference to the Situation in Lombardy, linked to the production of the Cartography of Organic Carbon in Soil and the Cartography of Agriculture and Extra-Agricultural Biomasses.

The planned soil sampling and analysis services were performed and completed within the **sub-action B7.2**. Moreover, a program of investigation and evaluation of agri-environmental indicators related to the organic matter content (carbon stock), the possible presence of chemical contaminants (heavy metals and PAHs) and the presence of edaphic agrobiodiversity (QBS-ar, based on the presence of micro-arthropods and annelids) was performed; these investigations were carried out in 4 Lombard farms using different types of organic matrices in their crop plan (FORSU, manure, sludge digestate and zootechnical digestate).

Achieved results: the chemical analysis carried out on soil samples showed a general improvement in soils fertility conditions through the evaluation of the main parameters defining the qualitative state of a soil, without contamination. For the sustainability assessment of the applied practices, edaphic fauna was also used as an indicator as it allows to describe the quality of the hosting environment, due to its sensitivity to changes induced by environmental parameters (climate change) or by anthropogenic practices. These results were collected into a **final Report of the monitoring activity** (Annex ATA3) which allowed us to define a **Model of integrated management plan for farms** (Annex MTA11) and a **technical and economical evaluation** of the application of technologies for the enhancement of the organic matrices in agriculture (Annex ATA4). Moreover, a preliminary draft of the Technical Recommendations for the sustainable enhancement of extra-agricultural organic matrices was drafted and the document was shared with other stakeholders (universities, public administrations, farmers) during a technical seminar which took place on the 9th of November 2021. During the meeting some suggestions were provided to improve the document and the final version of the **Technical Recommendations** was delivered at the end of November 2021 (Annex MTA12).

Conclusions: organic matter (OM) is a key parameter for assessing soil quality and fertility. A sustainable soil management must first be related to maintaining and possibly increasing the OM by promoting the safeguarding and recovery of the ecosystem services generated by the rural system. Among the effective agronomic practices to increase the soil OM content, organic fertilisation plays an important role, representing an example of a circular economy. The initial quality of the organic matrices and the treatments must allow the production of better fertilisers from a qualitative point of view, without risks for the environment and adequate to real needs. Therefore, their correct use must be included in integrated fertilisation plans. A further contribution to the growth of sustainability of the agricultural system with a strong impact in the reconstitution of the soil OM is finally provided by the integration with a conservative management of agricultural soils.

6.1.10 Action B8: International awareness activities

Starting date: 1st of April 2019 (as expected)

Ending date: 16th of March 2022 (expected date 31st of March 2022)

Beneficiary responsible for implementation: CCIVS

Deliverable/Milestone name		Expected date	Effective Date	Annex
Toolkit to develop awareness campaigns	D	30.09.2019	02.12.2019	See MTR
Communication Toolkit	D	30.09.2019	02.12.2019	See MTR
Soil Manifest	D	01.01.2022	01.01.2022	MTA 13
Toolkit and Communication Guidelines	M	30.06.2019	02.12.2019	NA
Global Communication Campaign	M	30.06.2019	30.06.2019	NA
Training Course	M	30.09.2019	14.10.2019	NA
Manifest (draft)	M	30.09.2019	02.12.2019	NA
Start local awareness campaign	M	01.01.2020	01.01.2021	NA
International Convention	M	31.03.2022	15-17.03.2022	NA
Delivery of the Manifest EU	M	31.03.2022	30.08.2021	NA

This action is subdivided into 4 sub-actions:

Sub-action B8.1 Capacity Building (training and communication toolkits):

The communication guidelines and the toolkit to develop awareness campaigns were defined at the very beginning of the project as well as the training course on Soil Protection and Management Training which took place from the 14-19 October 2019 in one of the CCIVS member's centres in France, *Village des Jeunes* (Fig. 9). **Four experts** were invited (Kate Curtis, Lucy Martin, Borja Franco who were supported by a LEGAMB Soil Expert Damiano Disimine) and **29 participants** attended the training course. The participants learned about the fascinating, living soil web and how they can restore and regenerate soils in their diverse contexts, getting their hand dirty, they made compost, and natural fertilisers, while exploring skills like reading the landscape, sharing ideas, innovations and inspirations drawn from the diverse group of chosen participants. The course addressed rural as well as urban issues and took place in a participatory and non-formal learning environment. In order to disseminate and promote the activities implemented during the training course, a specific [video](#) was created.



Figure 9: The training course at the “*Village des Jeunes*”

During the event, each participant came up with an action plan that they will implement with their local organisations after the training. These can include workcamps, community gardens, local awareness-raising campaigns, “Green the City” movements and similar projects. A Network of **Soil Ambassadors** was established to share and connect these local actions and forms part of the creation of the preliminary draft **Soil4Life Manifest** (see below).

After the training course, the communication campaign was launched using the CCIVS website, a specialised blog page, and through social media.

In order to ensure the long term impact of the project a **MOOC on Earth Advocacy and Living Soils**, not foreseen in the project proposal, was also created in addition to the Toolkit (<https://ccivs.org/ilearn/>). The MOOC provides tools for advocacy and for working for soil. This is also an integral part of the post life project as we continue to use these tools to ensure a greater participation of people for soil.

The MOOC was developed by two experts in time to be presented during the Conference, developed by COFA, working with an expert on soil and an expert on advocacy. It enables young people, and organisations to have a training in advocacy and specifically in how to use the Manifest after the Conference. This will support the maximum dissemination of the project and ensure a positive output in terms of the duration of the results of the project.

The MOOC also invited land defenders who provided case studies of their work in soil conservation and management. The planning for the MOOC was as follows:

1. *What is advocacy?*
 - Self assessment to check the level of understanding of the topic/previous skills in the field of advocacy and identify the learning needs (e.g. ranking survey);
 - Reflect on the core concept of advocacy to create a common level of knowledge before starting the in-depth sessions
2. *Why do we need advocacy and within Soil4Life manifesto and communication/promotion > focus: youth participation and engagement*
 - Vision, mission, core values and impact measurement for an effective advocacy work;
 - CCIVS and impact measurement;
 - Communication in advocacy and promotion: strategic and effective communication, communication styles, campaigning (online and offline);
 - Written and spoken advocacy;
 - Community organizing
3. *Defining the decision-making space and institutional advocacy (+ lobbying)*
 - Difference between advocacy and lobbying;
 - Networking for policy change, citizen lobbying
 - Monitoring tools
4. *Experiences from the field: expert on soils commons and on Rights of Nature, voices of land defenders... + call for best practices*
5. *What you can do on the Ground*

Moreover, CCIVS took part in different **online events** in the following years to give visibility to the Soil4Life Manifesto:

- a side event for the ECOSOC Youth Forum 2021
<https://www.facebook.com/secretariatccivs/videos/1175007749639161>
- the June Lab of the World Forum for Democracy organised by the Council of Europe
<https://www.facebook.com/WFDemocracy/videos/550679336067660>
- the UNESCO World Conference on Education for Sustainable Development
<https://www.youtube.com/watch?v=IJ5tlbbTbtg&t=14345s>

The Soil4Life project has been also **identified by the UNESCO network** since it meets the three needed criteria (duplicable, innovative, and impactful) and it has been selected among many other local citizen projects worldwide and it was finally featured in the UNESCO Green Citizens platform (<https://www.unescogreencitizens.org/projects/soil4life/>).

Finally, to promote the Soil4Life project we also used the means of Hug a Tree Day (<https://www.facebook.com/secretariatccivs/posts/4883020498491431>, <https://www.facebook.com/secretariatccivs/posts/4890642144395933>)

Sub-action B8.2 Local Campaign:

Due to the circumstances with Covid-19 these actions were postponed to respect the expected deadline (January 2021 instead of January 2020). CCIVS prepared and sent out the CALL for Local Actions and promoted this CALL through its mailing, newsletters and social media channels. However, since the pandemic extended its negative impact in 2021 and many European countries adapted public health policies, many grass-roots organisations faced obstacles to organise offline local actions and some of them have to cancel their foreseen actions due to the lack of participants who were not able to travel and reach the actions venues due to the vaccination requirements or sickness. Some organisations came across difficulties in maintaining their financial sustainability and human

resources, and had to switch their focuses temporarily or were not able to respond to the global action CALL even though they were still trying to implement small-scale actions with their local communities.

In total, **8 international voluntary service organisations** joined and organised local actions focusing on climate change and environmental sustainability (Tab 5). Among them, three had a special focus on soil management and conservation. The action types consisted of online events, volunteering workcamps and training courses. These actions were promoted through CCIVS dissemination channels and social media platforms. Soil4Life funding was not attributed to the projects as it was not requested.

Name of Organisation	Country	Starting Date	Ending Date	Number of Participants
Balmes Blancs	Spain	18-08-2021	29-08-2021	14
Service Civil International - Deutscher Zweig e.V. (SCI-D)	Deutschland	24-09-2021	30-09-2021	25
Voluntary Service International	Ireland	26-07-2021	30-07-2021	12
Uganda Voluntary Development Association	Uganda	29-06-2021	23-07-2021	15
International Voluntary Projects	Albania	07-07-2021	17-06-2021	15
Zimbabwe Workcamps Association	Zimbabwe	04-08-2021	18-06-2021	20
South Africa Volunteer Work Camp Association	South Africa	01-10-2021	15-10-2021	10
SCI Switzerland	Switzerland	02-09-2021	10-09-2021	10
TOTAL				121

Table 5: Local campaigns carried on by the Soil Ambassadors

Some projects had to convert some activities online or produce the contents via online tools and collaborations so that international volunteers who were not able to travel could still participate and contribute to these actions. For example, international volunteers from SCI Switzerland added or improved 33 entries on Wikipedia in achieved: 33 new or improved articles in German, English, French and Italian (more info are aivalable on https://meta.wikimedia.org/wiki/Wikipedia_for_Peace/Climate_Justice_2021). VSI Ireland's participants elaborated an online social media campaign gallery: <https://padlet.com/placementsvsi/ibnizenj58t2wvdr> and the future plans: <https://padlet.com/placementsvsi/h2nyb0lxn27d35bu>.

It's relevant to highlight that a project was able to include youth with fewer opportunities (YWFO). In addition, the Soil Ambassadors (established after the Training Course in 2019, see previously) were also working on, or will resume to work on, their personal actions with their local communities, such as:

1. an investigation project on productive green roof (with tomatoes) in the Instituto de Ciencias Agrarias, Spain;
2. awareness-raising activity in Spain, Portugal and Germany;
3. a creation of medicinal garden in Belgium;
4. a capacity building activity about soil management and utilisation in agriculture for national and international volunteers in Belgium;
5. public garden in Germany;
6. online advocacy actions on key dates eg. World Soil Day;

Sub-action B8.3 The Soil Manifest:

A first draft of the **Soil4Life Manifest** (Fig. 10, Annex MTA13) was collectively created during the Training Course, after consultation and feedback it was launched online on World Soil Day 2019. It was a collaborative effort and received input from various diverse voices. In March and April 2021, two zoom meetings were held with a Microbiologist lawyer, human rights lawyer as well as other Soil experts together with the coordinator of the manifesto, Kate Curtis. Afterwards, input and discussions took place on an interactive online document, a final version was drafted, opened for revision and agreed upon.



Figure 10: The cover of the Soil Manifest

In July 2021, **17 volunteers** from around the world helped us translate the Manifesto into **10 different languages**, including the 6 official languages of the United Nations: English, French, Spanish, Russian, Chinese, Arabic, Portuguese, Italian, German and Indonesian, all the translations can be found on this link: <https://ccivs.org/soil-manifesto/>. The Soil4Life Manifesto is a call to action, shared responsibility and an ethical commons based approach to soil conservation, regeneration, protection and use.

The finalised version of the Manifest was officially launched at the end of August 2021 and it was delivered in March 2022 to the European Commission and presented during the International Conference which took place online from 15 to 17 March 2022 (see below). During the project lifetime, **529 individual and collective adhesions** to the Manifest were collected .

Some numbers regarding the Manifesto:

Soil4Life Manifesto launch for the International Soil Day and promotion during the Earth Day 2020

International Soil Day:

- Facebook post: 1,209 reach / 64 engagements
- Instagram post: 286 reach

Earth Day

- Facebook post: 544 reach / 22 engagements
- Instagram post: 187 reach

Soil4Life Manifesto launch for the International Soil Day and promotion during the Earth Day 2020

International Soil Day:

- Tweet with picture: 614 impressions and 8 engagements
- 2nd tweet of the chain: 259 impressions and 3 engagements
- 3rd tweet with link to the Soil4Life Manifesto: 249 impressions and 1 engagement

Earth Day

- Tweet with picture: 123 impressions and 4 engagements
- 2nd tweet of the chain: 80 impressions

The time to act is now! Newsletter <https://sh1.sendinblue.com/acc46122klpfe.html?t=1647959441>

Soil4Life Manifesto Communication Pack <https://trello.com/b/bP9sYJkl/soil4life-manifesto-communication>

Soil4Life Manifesto teaser <https://www.youtube.com/watch?v=oMH4wPhFqH0>

Soil4Life Manifesto, website version (available in English, French, Spanish, Russian, Chinese, Arabic, Italian, Indonesian, German, Portuguese) <https://ccivs.org/soil-manifesto/>

They talked about us:

<https://4returns.commonland.com/events/webinar-soil4life-conference/>

<https://regenerationinternational.org/event/webinar-soil4life-conference/>

https://cinea.ec.europa.eu/events/soil4life-online-conference-what-essential-invisible-eye_en

<https://www.facebook.com/ngounesco/posts/4186268818152507>

<https://twitter.com/SoilsAlliance/status/1447472038294130690>

<https://twitter.com/regenerationcan/status/1435291233870651398>

https://www.facebook.com/permalink.php?story_fbid=10159874406947848&id=340964432847

Sub-action B8.1 International Convention

The **Soil4Life Conference** was an online conference organised and hosted by The Coordinating Committee for International Voluntary Service – CCIVS, between the 15-17 March 2022 (<https://ccivs.org/soil4life-conference/>, Fig. 11).



Figure 11: The poster of the Final Conference during which the Soil Manifest was presented

The conference was initially intended to take place in UNESCO over one day, however due to the pandemic situation and the impossibility of booking rooms in UNESCO the decision was taken to go online. We believe that this decision actually enabled us to have a far richer final event than initially intended as not only did we have the conference which took place over three days on three different themes, we also had all of the supporting tools, such online communication, videos and the MOOC (online training course, see below) on Earth Advocacy and Living Earth. We invited indigenous peoples, peasants, permaculture activists, young people working with soil, International Voluntary Service organisations, experts on soil, lawyers, representatives from the UN (UNESCO and the FAO) and an advocacy expert. In total the three day Conference hosted **30 speakers from 20 countries in 6 regions of the world** (Africa, Arab states, Asia, North and South America and Europe). Approximately **300 people** were able to access the conference on Zoom, Facebook Live and Youtube. This is attributed to the fact that a virtual event transcends the obstacle of time and distance. Participants of the conference gave positive feedback and found the conference both informative and inspiring. For further details on the agenda of the conference see Annex ATA5.

The Main objective of the 3 day event was;

- Create Awareness on the state of soil
- Present the Soil Manifesto
- Hear from Key players in the field on how they are contributing to the protection and regeneration of healthy soils
- Amplify Youth Voices and Voices from the field.
- Highlight the importance of International Volunteer service in soil Management

The Expected long term result of this conference is that there will be a ripple effect of creating awareness from the conversations during the various online sessions more priority will be given to the protection, conservation and regeneration of soil and that soil management will be a factor to be considered when designing activities around International Volunteer Service.

With the presentation of the Manifest, it is expected that in the long run through the MOOC more people will acquire practical knowledge on advocacy and that they will be able to use the Manifest document as a tool for advocacy. Finally it is also expected that the post life project will continue the positive aspects of the conference.

Communication of the Soil4Life Conference

Between 10/02/2022 and 17/02/2022, CCIVS posted 39 tweets that received more than 5,500 impressions. Facebook and Instagram reached more than 85,000 users and our LinkedIn page collected 1,659 impressions (see Annex ATA6).

Newsletters:

- Thank you newsletter: <https://sh1.sendinblue.com/afujal22klpfe.html?t=1650545989>
- Confirmation of registration <https://sh1.sendinblue.com/afqbl922klpfe.html?t=1650546010>
- Soil4Life Conference invitation 2 <https://sh1.sendinblue.com/afm3vx22klpfe.html?t=1650546029>
- Soil4Life Conference <https://sh1.sendinblue.com/afdoh922klpfe.html?t=1650546064>

They talked about us:

<https://www.facebook.com/BundesverbandBoden/posts/2497507363715586>

<https://4returns.commonland.com/events/webinar-soil4life-conference/>

<https://regenerationinternational.org/event/webinar-soil4life-conference/>

https://cinea.ec.europa.eu/events/soil4life-online-conference-what-essential-invisible-eye_en

List of videos produced for the Soil4Life Conference:

The videos and promotional materials of the conferences were developed by an expert in video production and graphic design, the manifesto graphic video and the Land Guardians can be found on this link: <https://ccivs.org/soil4life-conference/media/>

A Motion Graphic video, 3 mins

To transform the Soil4Life Manifest into a motion graphic video.

4 Short videos real-time style, 90 sec/each

(the manifesto stages)

Presenting the stages of the manifesto development:

- the Soil4Life training
- the follow-up and local actions
- writing the manifesto
- the online conference promotion

3 Short videos real-time style, 90 sec/each

(youth voices)

Four young soil activists from four different countries report on their soil states and the local actions that they have taken to conserve the soil in their locations.

Youth Voices,

soil activists report on the state of soil in their countries and the local actions that they have undertaken to conserve the soil

A Short documentary film, 4 mins

Collect the videos of the soil youth activists into one documentary and edit the video in a documentary film style.

A Soil4Life manifesto poster

Design a poster that summarises the Soil4Life Manifest. Partner organisations will receive the designed poster as part of the Soil4Life promotion campaign. These organisations will print it and display it.

A Soil4life manifesto booklet

Create a booklet containing the Manifest content Soil4Life Manifest booklet

Branding and promoting virtual conferences

Create the following:

- The conference banner (1 banner).
- Promotional posts on social media (3 posts).
- The conference agenda.
- Countdown posts (5 days).
- Cards for each speaker & a group card for everyone.
- The virtual background to use during the online conference for the facilitators and speakers.
- Three promotional videos for social media featuring the main speakers.

2 pre-recorded conferences, 90 mins /each

Collect the interviews from the panelists and the facilitators into two pre-recorded conferences (documentary video style), taking into account: design GFX intro for the speakers, placing the lower third for the speakers, embed their presentations into the video, add credits at the end of the video, and design GFX intro and outro. The required video format and guidelines were shared with the panelists. For the Q&A section, the questions were collected and sent in advance to the panelists. The Conferences will focus on

- **Soil Land Guardians** - voices from indigenous peoples, peasants, farmers
- **Volunteers and Soil** - event focusing on the work of voluntary service organisations around the world for soil, including the voice of volunteers and inviting IVS organisations.

One 'Live' Conference of 90 minutes

The Future of our Soils discussion inviting external speakers (diverse speakers), formal presentation of the manifesto, advocacy session how to use the Manifesto and presentation of the MOOC, videos, break out rooms - meet the speakers, Q and A round table discussion.

6.1.11 Action C1: Monitoring of the project impact on target groups and environmental issue

Starting date: 1st of April 2019 (as expected)

Ending date: 31st of March 2020 (as expected)

Beneficiary responsible for implementation: LEGAMB

Deliverable/Milestone name		Expected date	Effective Date	Annex
Ex-ante Report on Italian public knowledge	D	31.05.2019	07.05.2020	MTA 14
Soil Governance Indicators Table	D	31.03.2019	30.06.2019	See MTR
Project impact Final Report	D	30.06.2022	30.03.2022	MTA 15

Establishment of the WG for monitoring Soil governance	M	31.01.2019	18.04.2019	NA
Start of ex ante evaluation on general public	M	31.01.2019	28.04.2020	NA
Start ex post evaluation on general public	M	31.01.2022	30.11.2021	NA

This action is aimed at assessing the achievement of project objectives and results and is divided into 4 sub-actions respectively addressed to public administrations (sub-action C1.1); farmers (sub-action C1.2); freelance professionals (sub-action C1.3); general public and young people (sub-action C1.4) as follow:

Sub-action C1.1 (Public administrations): The Working Group (WG) dedicated to assess the project impact on public administrations has been set up at the early stage of the project. The WG was in charge to verify any progress of the decision-making processes concerning soil governance at national, regional and local levels and monitor any change in soil governance. The WG was coordinated by LEGAMB, and made up of representatives of the project beneficiaries who, by institutional mandate, have a close link with public administrations in charge of soil management and have a precise, critical and updated vision on the progress of environmental, agricultural, urban planning related legislative and policy initiatives. The first meeting of the WG was held on 18 April 2019 and a panel of indicators was defined to monitor possible effects of the project on public administrations. Periodic meetings of the WG were held throughout the whole project lifetime.

The project impact on public administrations group was measured by the WG through the following means: verifying the adoption of Charter of Principles for Sustainable Soil Use by at least 12 local authorities; the setting up of the Permanent Consultation Board; the release of the White Paper; and the setting up of at least 10 Regional Observatories on Soil.

During the project lifetime, the Charter of Principles for Sustainable Soil Use was formally adopted by 24 local authorities from Municipalities (9) and Regions (15), so the project goal was fully achieved. Moreover, the after LIFE activity has led to the official adoption of the document by further 14 other municipalities, including the municipality of Rome.

The Permanent Consultation Board was formally established by the Italian Environmental Ministry on 13.02.2020 by a Ministerial Decree. The reason for this delay compared with the foreseen deadline (January 2019) was due to the fact that the Ministry expressed its willingness to include in the permanent consultation board four relevant Italian Ministries (MATTM, MIT, MIBACT, MIPAAF). On the other hand, this national legal tool which was not considered in the project proposal, will undoubtedly constitute a strong impulse to national policy on soil consumption prevention and land restoration.

The White Paper was released on the 13th December 2021, in line with the project expected deadline. 15 Regional Observatories on Soil were set up during the project lifetime, exceeding the expected number of 10, thus this project goal was fully achieved. The representatives of the Regional Observatories had also adopted the Charter of Principles for Sustainable Soil Use in the context of a plenary meeting which took place on 13.12.2021.

Sub-action C1.2 (Farmers): In order to measure the impact of the project on this target group, the formal commitment of farmers in implementing conservative agronomic practices was assessed by measuring the number of farmers who adopted the voluntary guidelines developed under action B.3.1.

The number of adoptions is thus the main impact indicator on this target group. According to the proposal, 5,000 farmers / agricultural enterprises were expected to adopt the voluntary guidelines for farmers; 45/60 CIA regional delegates were expected to be trained as well as 800 farmers. Taking into consideration the current limitations due to the sanitary emergency, and the consequent difficulties to realise public events, the 40 training courses were replaced by a remote video platform (*CIA per il suolo* - CIA for the soil, website: <https://www.ciaperilsuolo.it>), including documents, videos and technical forms and to which farmers can have access through the filling in of an online registration form. The platform had the added value to reach more farmers than expected and to provide an informative product being available also after the end of the project. At the end of the online courses, farmers have received the assignment of “Soil Custodian”. During the project’s implementation, a total of 7.500 farmers were involved against the 5,000 expected; 884 farmers attended the training activities (becoming “Custodians of the Soil”) against the expected 800, signing and adhering to the voluntary guidelines. Moreover, a monthly newsletter was created including articles drafted by the CIA’s technical staff. The newsletter, which was not foreseen in the project proposal, was an adjunctive way to promote and disseminate the voluntary guidelines.

In addition, a qualitative assessment of the training for farmers was carried out, using a specific anonymous questionnaire focused on the training contents and methodology, teaching effectiveness and quality of teachers. The questionnaire was distributed to CIA’s regional and provincial representatives involved in the 3 training seminars (action B.3) addressed to CIA’s local representatives. Once tested on this first target, the questionnaire was distributed to farmers who have accessed the platform *CIA per il suolo* (see par. 6.1.5). A few weeks after the Forum for Sustainable Soil Management (action B.4) held on December 12 in Rome and attended by more than 40 professionals and researchers, about 20 completed questionnaires were received, one of which was sent jointly by all the representatives of the Network of Technical Professions.

Sub-action C1.3 (freelance professionals): In order to measure the impact of the project on this target group, the formal commitment of professionals in adopting methodologies, tools and approaches for the protection of soil resources was assessed by measuring the number of them adopting the voluntary guidelines for technicians and professionals, developed under action B.4.1.

The number of professionals who adopted the guidelines is in fact the main impact indicator on this target group. As described in the project proposal, we expected the adoption by at least 600 professionals as well as to involve at least 600/800 professionals in the training activities. As described in action B.4, during the project lifetime, the 3 cycles of training meetings (including the asynchronous version) were carried out by involving around 8,000 (7,965) professionals, a number ten times bigger than expected by the project proposal, with 3,360 of them signing the voluntary guidelines for technicians and professionals (against 600 expected by the proposal), thus fully achieving the project’s target goals. Moreover, the asynchronous course is still available at least until the end of 2022, so we expect that those numbers will further increase in the next few months.

The questionnaire addressed to professionals to collect feedback from participants on the quality of the training (methodology, effectiveness of the teaching tools, quality of teachers, etc.) was defined by the end of September 2020 in agreement with the Professional Associations that cooperated in the training courses organisation. By the end of the training activities a total of 4,720 professionals filled in the questionnaire with over 70% of them (3,360) signing the voluntary guidelines.

Sub-action C1.4 (general public and young people): In order to assess the public awareness on the topic of soil degradation, a national survey was commissioned by the municipality of Rome to an Italian-based consulting agency (Quorum/YouTrend) specialised in qualitative and quantitative research and polls in social, political and commercial settings. The ex ante survey was conducted between April and May 2020 (1210 interviews representative of the Roman and Milan population) and the ex-post survey was conducted between the end of November and the beginning of December 2021 (1200 interviews representative of the Roman and Milan population. See Annexes MTA14 and

ATA7). Both surveys were conducted using the CATI methodology (telephone interviews). With the first survey three topics were tested: the topic's knowledge; the awareness of the project; and the perception of the people with regards to the topic. The ex-ante survey revealed that more than 80% of the citizens of Rome and Milan believed that the soil is an extremely important topic. However the knowledge of the population about soil degradation was low. In fact, less than 40% of the interviewees knew the right definition of the term "soil degradation". However, while the population didn't seem to be properly informed about the topic, soil degradation was a sensitive topic for the interviewees. After conducting a second survey using the same questions as the first one, the results were compared and it was noted that the percentage of people believing that soil preservation is an extremely important topic, seemed to have slightly decreased from 80% to 79,6% in Milan and 67,8% in Rome. If the general knowledge of the interviewees decreases, the percentage of citizens who demonstrate in-depth knowledge of the subject rises, answering correctly to both questions posed on the subject: in Milan we go from 3.7% in 2020 to 8.8 % in 2021. In Rome, it goes from 5.2% in 2020 to 8.6% in 2021. Over the last year, the percentage of those who know the Soil4Life project has grown by + 5.4% in Milan and + 6.3% in Rome, respectively. The sample became aware of the project mainly thanks to television services (especially Milanese citizens) and through the initiative's website. The number of citizens who, although not familiar with the project, declared themselves interested in knowing it and that they want to participate in initiatives to combat land consumption in the future had also increased (+ 3.4% in Milan and + 2.8% in Rome). In conclusion, thanks to the analysis by socio-demographic factors, it became clear that the knowledge degree of the project was better in the ex-post survey for the least educated group of the sample. From the analysis of the results of the survey, it should be noted the presence of a fair demand for training, both for actual courses and for information events.

As regards the impact of awareness initiatives at international level (action B.8), in January 2020 CCIVS distributed a questionnaire to the 29 volunteers involved in the training course for "soil ambassador (B.8.1) that took place in November 2019, involving people from different European countries. Another questionnaire was sent after each local campaign to collect data on the participation and involvement of the public in the communication activities that volunteers have organised in the different countries of origin. According to the questionnaires' results, 67% of the Soil Ambassadors have used the Soil Management Toolkit in their actions or projects; and 78% of them joined took the free online CCIVS iLearn courses 'Everything Gardens' or the 'Basics of Bioconstruction'. All of them have read and signed the Soil4Life Manifesto and are willing to keep informed about future actions related to soil conservation and preservation from CCIVS or the project partners. Moreover, 89% of the soil ambassadors confirmed that the Soil Training had an impact on their work or on their project. See Annex MTA15 for further details.

6.1.12 Action C2: Socio-economic monitoring

Starting date: 1st of March 2019 (as expected)

Ending date: 31st of March 2020 (as expected)

Beneficiary responsible for implementation: LEGAMB

Deliverable/Milestone name		Expected date	Effective Date	Annex
Ex ante monitoring Report	D	30.06.2019	15.06.2020	MTA 16

Ex post monitoring Report	D	31.03.2022	31.03.2022	MTA 17
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On the occasion of the design of the Executive Action Plan (action A.1), released in March 2020, the experimental design of the socio-economic survey was defined in detail. On 15 April 2019, the first **list of stakeholders** was drawn up to select the people to be interviewed in the ex-ante phase of socio-economic monitoring. Between May and June, the list of 'privileged witnesses' was updated by the project partners. The text of the **interview** was defined in June 2019 and the telephone interviews were conducted between July 2019 and February 2020. For contacts and interviews the account ricerca@soil4life.eu was activated in July 2019. A total of **20 people** belonging to various bodies and institutions dealing with soil-related issues (Farmers' representative associations, Research bodies and Universities, professional networks, local administrations, relevant Ministries, environmental associations, etc.) were selected and interviewed. On the basis of the feedback received from the interviews, the first draft of the questionnaire for the socio-economic survey was released in December 2019, while the final version was completed at the end of January 2020.

Between 12 February and 20 May 2020, the questionnaire was distributed and filled in by **263 people**. Based on the results of the interviews and questionnaire responses, the **Ex ante Report** was delivered on 15.06.2020 (Annex MTA16).

The **Ex post survey** started in July 2021 and it was developed following the same methodology applied for the implementation of the Ex ante survey (questionnaire filled by **303 people** and interviews to **19 relevant stakeholders**). The Ex post Report was delivered on the 31st of March 2022 (Anne MTA17).

The diachronic reading of the monitoring actions carried out in the ex-ante and ex-post phase, shows a complete picture of the perceptions expressed both on the expectations and answers, and on the actual fulfilment of the objectives. The data that emerges most clearly, both from the interviews and from the questionnaire, is the ability of the project to affect the aspects linked to territorial planning and the development of building skills linked to the urban regeneration of the existing built fabric. Among the most important contributions that are recognized to the project is the increased level of awareness of the environmental benefits that are associated with the adoption of sustainable land management practices. The commitment to disseminate this knowledge to agricultural operators is particularly appreciated, because of the difficulty to achieve this target group by dissemination actions on environmental issues.

6.1.13 Action D1: Socio-economic monitoring

Starting date: 1st of October 2018 (as expected)

Ending date: 31st of March 2020 (as expected)

Beneficiary responsible for implementation: LEGAMB

Deliverable/Milestone name		Expected date	Effective Date	Annex
Information boards	D	31.03.2019	15.03.2019	See MTR
Roll Up	D	31.03.2019	08.12.2018	See MTR
Press kit	D	31.03.2019	31.03.2019	See MTR

Leaflet	D	31.03.2019	15.03.2019	See MTR
Gadget	D	30.06.2019	30.06.2019	See MTR
Brochure	D	31.03.2020	03.08.2020	MTA 18
10 Video Clips	D	30.06.2020	30.09.2021	MTA 19
Layman's Report	D	31.03.2022	31.03.2022	MTA 20
Website online	M	31.03.2019	28.03.2019	NA
Initial Press Conference	M	31.03.2019	04.12.2018	NA
Social Media launched	M	30.06.2019	31.03.2019	NA
Together4Soil 1 st edition	M	31.12.2019	05.12.2019	NA
Together4Soil 2 nd edition	M	31.12.2020	05.12.2019	NA
Together4Soil 3 rd edition	M	31.12.2021	04-05.12.2019	NA
Press Tour	M	30.04.2020	14.07.2021	NA

The visual identity of the project has been defined at the very beginning of the project. All the materials foreseen by the project were produced and are listed below:

- **Information boards:** 9 information boards (7 in Italian and 2 in English) were printed and distributed to all the associated beneficiaries;
- **Roll ups:** 8 roll ups were realised and distributed to all the associated beneficiaries and used in the occasion of public events;
- **Press Kit:** 50 copies were realised and distributed to journalists;
- **Project leaflet:** it was produced (1.000 copies in Italian, 1.000 copies in English, 500 copies in Croatian) and is being distributed to all the partners and in the occasion of public events;
- **Gadgets:** 500 mugs, 500 notebooks, 1.000 pencils and 1.000 pens were realised and they were distributed on the occasion of public events;
- **Project brochure:** it was produced (7.000 copies in Italian, 2.000 copies in English, 1.000 copies in Croatian) and is being distributed to all the partners and on the occasion of public events (Annex MTA18).

Web site: on line at www.soil4life.eu and periodically updated. It can be consulted in both English and Italian. On the website the following document/material is available: **22** videos, **28** images and **131** news. During the project lifetime, the website was **visited by 15.000 people**.

Social media: more than **100** posts on social (Fb, Tw e Ig)

Press Conference: the first press conference of presentation was held on the occasion of the World Soil Day 2018 (**05.12.2018**).

Together4Soil events:

The **first edition of the Together4Soil event** (Fig. 13) took place in Rome and Milan on the occasion of the World Soil Day (05.12.2019). In Rome, a flash mob was organised in a central square of the city (Piazza del Popolo) to draw attention to soil consumption caused by cementification, symbolically showing the amount of soil lost every minute in Italy. A big chronometer marked the time (one minute) and a large banner has on it the slogan “Stop Soil Consumption”. In Milan instead, a 900 metres square flower bed located on *Suzzani* street was de-sealed by the volunteers of LEGAMB, and the cement was substituted with planting grass seeds. Photos and videos documentation of the two events are available on the project website (<https://soil4life.eu/foto/>).



Figure 13: The first edition of the Together4Soil event in Rome

The **second edition of Together4Soil event** took place in Rome as a flash mob event against the soil consumption caused by cementification in urban areas. Due to restrictions caused by the sanitary emergency situation, no people attended the event and the flash mob was filmed, it was launched on the World Soil Day (05.12.2020) and it was published on the [Soil4LIFE website](http://Soil4LIFE.website). In Milan as well, a manifestation was organised to denounce soil consumption and to promote de-sealing interventions (Fig. 14) . Moreover, on the occasion of Hearth Day (22.03.2021) another flash mob was held by LEGAMB staff in Vaprio d’Adda (province of Milan) to draw attention to the soil consumption due to storage warehouses.



Figure 14: The second edition of the Together4Soil event in Milan

Finally, also the roman **third edition of the Together4Soil event** was substituted by a mini video clip due to restrictions caused by the sanitary emergency situation which made it impossible for people to be present. Similarly to the second edition, the video was launched on the World Soil Day (05.12.2021) and it was published on the [Soil4Life website](https://soil4life.eu). In Milan instead, on the 4th of December LEGAMB staff organised a flash mob in *Cividade al Piano* (province of *Bergamo*) to draw attention to the excessive consumption of soil due to the proliferation of warehouses dedicated to logistics in peri-urban areas, which threaten and fragment ecosystems.

Articles: A total of **198 articles** were published (web and newspapers) referring to the Soil4Life project and they are available on the project website <https://soil4life.eu/rassegne-stampa/>). In March 2020 one article describing the project Soil4Life was also published in the **SISS newsletter** (<https://scienzadelsuolo.org/newsletter.php>). Moreover, the project Soil4Life was also featured in the national newspapers “*La Repubblica*” (04/12/2020) and “*La Nuova Ecologia*” (21/04/2021) and it was cited in the yearly **Report on Agroecology Status in Italy** (July 2021).

Finally, the following **two** articles were drafted by CREA (Tab 6):

N	Date	Title
1	15.10.2020	Il CREA su "La Nuova Sardegna": focus sui concorsi didattico-educativi per studenti "Biotech School Contest" e "Soil4Life" -
2	11.03.2022	Soil4Life: l'impegno del CREA per la gestione sostenibile del suolo - Soil4Li

Table 6: Articles drafted by CREA

Broadcast: **15 broadcast** on TV and web TV were realised by LEGAMB. On the 21st of January 2020, a **special broadcast** focusing on the Soil4Life project was aired by *RAI Parlamento* programme

(RAI 3 TV channel). The television service is available on this [link](#) (Time: 10 m:54s, Fig 15). Finally, CREA released the video *Suolo e Agricoltura: dalla ricerca all'azione* (Soil and Agriculture: between research and action) on the 26th of September 2021 addressing the question “What would be needed for the soil protection”

(https://www.youtube.com/playlist?list=PLuHR_wWt4GLX11Ca3CsQAseKDYYFoc4P8).



Figure 15: The television service focusing on the Soil4Life project

Press releases: During the project life time, **13 press releases** have been drafted by LEGAMB (and they were uploaded on the project website: <https://soil4life.eu/comunicati-stampa/>) (Tab 7):

N	Date	Title
1	04.12.2018	<i>Domani è la Giornata Mondiale del Suolo: senza suolo non si vive. E non è rinnovabile! Soil4Life, il progetto europeo per la salvaguardia di questa fondamentale risorsa presentato oggi a Roma</i>
2	16.10.2019	<i>Giornata mondiale dell'alimentazione. Soil4Life: diete sane e gestione sostenibile del suolo per sconfiggere la fame e proteggere la terra</i>
3	29.11.2019	<i>Giovedì 5 dicembre è la Giornata mondiale del suolo. Doppio flash mob a Roma e Milano. Soil4Life chiama i cittadini all'azione per salvare la terra</i>
4	04.12.2019	<i>Il 5 dicembre è il World Soil Day. STOP AL CONSUMO DI SUOLO! Domani flashmob in piazza del Popolo a Roma</i>

5	05.12.2019	<i>Oggi è il World Soil Day. Ogni anno in Italia cementificati 4900 ettari. Come se nascesse una nuova città</i>
6	27.01.2020	<i>Soil4Life, il progetto europeo per la salvaguardia del suolo approda nelle scuole. Parte il percorso di formazione che porterà sui banchi un programma di attività per capire a fondo il legame tra il suolo e la nostra vita sul pianeta</i>
7	22.07.2020	<i>Rapporto ISPRA sul consumo di suolo, Legambiente: “senza una legge nazionale di tutela c’è il rischio di una ripartenza della cementificazione selvaggia” Alla città di Roma la maglia nera per il consumo del suolo. “Siamo al lavoro con ISPRA e il Comune di Roma per invertire il trend negativo, elaborando la Carta della permeabilità”</i>
8	04.12.2020	<i>Giornata Mondiale del Suolo 2020. Degrado del suolo: un quarto del territorio italiano peggiora</i>
9	19.01.2021	<i>Agricoltori 2.0 con Soil4Life: lezioni di sostenibilità grazie a “Cia per il suolo”</i>
10	04.06.2021	<i>La difesa del suolo nelle scuole italiane: premi per i vincitori del contest organizzato dal progetto Soil4Life</i>
11	14.07.2021	<i>Video inchiesta “Neanche la pandemia ferma il consumo di suolo” Speciale Roma e Milano</i>
12	17.11.2021	<i>Dalla Commissione Europea l’impegno per una legge europea sul Suolo</i>
13	29.03.2022	<i>Si conclude il progetto europeo Soil4Life: “La società civile chiede una leadership europea nella sfida per combattere il degrado del suolo”</i>

Table 7: Press Releases published by LEGAMB

Moreover, CREA published **13** further press releases (Tab. 8). The last of them was published after the end of the project, thus representing a first step in the after LIFE communication activity:

N	Date	Title
1	3.11.2018	<u>Suolo: Anche il CREA nel progetto Soil4Life</u>
2	16.10.2019	<u>Il CREA protagonista della Giornata Mondiale dell’Alimentazione con il progetto Soil4Life -</u>
3	29.11.2019	<u>Il CREA presenta il progetto Soil4Life</u>
4	2.12.2019	<u>Giornata mondiale del suolo: dalla ricerca all’azione</u>
5	3.12.2019	<u>Il Crea all’Isola della sostenibilità: tutti gli appuntamenti</u>
6	28.01.2020	<u>Anche il CREA con Soil4Life approda nelle scuole</u>
7	30.04.2020	<u>Suolo: quali sono le ricadute socioeconomiche della gestione sostenibile? On line questionario progetto Soil4Life</u>
8	8.10.2020	<u>SOTTO SOTTO... IDEE PER IL SUOLO: al via il contest promosso dal CREA e Legambiente - CREA</u>
9	8.03.2022	<u>Ue: con Soil4Life l’Italia protagonista nella salvaguardia del suolo - Ue: con Soil4Life l’Italia protagonista nella salvaguardia del suolo - CREA</u>
10	11.03.2022	<u>Soil4Life: l’impegno del CREA per la gestione sostenibile del suolo</u>
11	23.03.2022	<u>Il CREA all’evento conclusivo del progetto Soil4Life</u>

12	28.03.2022	Soil4Life: Il CREA incontra il Sereni di Roma
13	21.04.2022	Aspettando la Giornata della Terra arriva “La nostra Terra!”, la prima docufiction CREA sul suolo

Table 8: Press Releases published by CREA

Press Tour: Due to pandemic restrictions regarding mobility the foreseen press tour has been replaced by a **journalistic video reporter** on land use and consumption in the urban areas of Rome and Milan. Project partners as well as local administrators have been interviewed on urban policies adopted in Rome and Milan to address land take. The 30 minutes reportage [“Neanche la pandemia ferma il consumo di suolo – Speciale Roma e Milano”](#) showed urban areas characterised by soil sealing and consumption together with artificial areas regenerated. The press report was presented on 14th July 2021, in a virtual press conference to Italian journalists and it was cited by several newspapers/newsletters. Re Soil Foundation in particular dedicated a long article to the Soil4Life video reporter in its [newsletter](#) (Fig. 16).



Figure 16: The Re Soil Newsletter citing the Soil4Life video reporter

Videoclips: 10 short videos have been realised on soil as a fundamental but limited resource to be protected and preserved (Annex MTA19).

VIDEO n. 1 [L'essenziale è invisibile agli occhi](#) - Time: 1m:24s - Released: 05/12/2020

VIDEO n. 2 [Obiettivo 2050](#) - Time: 1m - Released: 17/03/2021

VIDEO n. 3 [Relazione suolo e cambiamenti climatici](#) - Time: 1m:08s - Released: 22/04/2021

VIDEO n. 4 [La crescita urbana del Comune di Roma](#) - Time: 1m:42s - Released: 26/05/2021

VIDEO n. 5 [Isole di calore urbane](#) - Time: 1m:33s - Released: 05/06/2021

VIDEO 6 [Legge sul consumo di suolo](#) - Time: 1m:24s - Released: 04/03/2022

VIDEO 7 [*Perdita di servizi ecosistemici, degrado del suolo e perdita di produttività*](#) - Time: 1m:16s - Released: 22/09/2021

VIDEO 8 [*Per le scuole*](#) - Time: 2m:26s - Released: 04/03/2022






VIDEO 9 [*Monitoraggio satellitare*](#) - Time: 1m:44s - Released: 22/09/2021

VIDEO 10 [*Soluzioni/proposte/buone pratiche: tecniche di agricoltura conservativa e utilizzo di spazi costruiti inutilizzati nei centri urbani*](#) - Time: 1m:23s - Released: 14/10/2021

Docufilm CREA: A docu-film, not foreseen by the project's proposal, was created by CREA in order to promote the Soil4Life project (*La nostra terra* - Time: 1h.04min.31s https://www.youtube.com/playlist?list=PLuHR_wWt4GLWdkcWo5sENWOT8y6WkEBAC). The docu-film was produced involving the students of the agricultural Institute “Emilio Sereni” in Rome and it was officially presented in Rome on the 7th of June 2022.

Seminars, conferences, workshops: Events, seminars and conferences attended by the representatives of the Soil4LIFE project partners during the project lifetime are reported in Tab 9. On these occasions, the project Soil4Life was presented and promoted and it was possible to carry on a networking activity with the representatives of other LIFE and non-LIFE projects..

N	EVENT NAME	DATE	ORGANISED BY	LOCATION	PARTNER INVOLVED	POSTER/PRESENTATION
1	Presentation of the book “100 parole per salvare il suolo” (100 words to save the soil)	22.01.2019	ALTRA ECONOMIA	In person seminar (Rome, Camera dei Deputati)	LEGAMB ISPRA	
2	“Il suolo circolare. Una nuova cultura di bonifica per la rigenerazione urbana”	08.07.2019	Lombardy region AUDIS	In person seminar (Milan)	LEGAMB ISPRA	

3	<i>“Un suolo per la vita”</i>	06.12.2019	<i>Isola della Sostenibilità</i>	In person seminar (Rome)	CREA CIA LEGAMB ISPRA	
4	Presentation of the “Re Soil Foundation”	27.01.2020	RE SOIL FOUNDATION	In person meeting (Rome)	LEGAMB ISPRA	
5	<i>“A..B..Compost. Sostanza organica di valore in agricoltura biologica”</i>	29.09.2020	AIAB	Remote workshop	LEGAMB	
6	<i>“Il suolo: strumenti di conoscenza e tutela della risorsa”</i>	03.12.2020	ARPA Umbria	Remote workshop	ISPRA	
7	ECOMONDO	04.11.2020	Italian Exhibition Group	Remote workshop	LEGAMB	

8	EU GREEN WEEK	05.06.2021	Directorate-General for Environment of the European Commission	Remote workshop	LEGAMB	
9	Territorial Future	24-27.08.2021	ERSA	Remote workshop	ISPRA	
10	Bioeconomy for soil regeneration	01.10.2021	RE SOIL FOUNDATION	Remote workshop	LEGAMB	
11	SOIL MISSION WORKSHOP	21.03.2021	INRAE	Remote workshop	CREA	

Table 9: List of events, seminars and conferences attended by the project's beneficiaries

Final Conference: The final Conference took place in Rome on **29.03.2021**. About **600 people** attended the meeting, both in person (55) and remotely (more than 500). All the Soil project's partners presented the activities implemented and the achieved results during the project lifetime. Afterwards, a round table took place involving **Angelo Salsi**, Head of Unit of the **LIFE** Programme, **Sabrina Alfonsi**, Councilor for Agriculture, Environment and Waste Cycle of the Municipality of Rome, **Stefano Ciafani**, President of Legambiente, **Gianpaolo Vallardi** President of the Agriculture Commission of the Senate of the Republic, **Chiara Braga** Environment Commission Chamber of Deputies, **Mirco Barbero** Directorate-General for the Environment of the European Commission, **Rossella Muroli** Vice-President of the Environment Commission of the Chamber of Deputies, **Alessandro Bratti** ISPRA General Manager, **Giuseppe Corti** Director of the Agriculture and Environment Research Center CREA and **David Newman** Founder and Leader European Circular Bioeconomy Policy Initiative (Annex ATA8, Fig. 12).



Figure 12: The Soil4Life staff at the Final Conference

The Final Conference was promoted in Rome and Milan through a **specific DOOH campaign** lasting for two days (28th and 29th of March) in 4 different locations. During this campaign, a total of 1.000 plays of a brief video on the Soil4Life conference were aired, reaching an estimated number of 407.000 people (see the [post evaluation campaign](#) for further details).

Layman's Report: In the last month of the project, the Layman's report was drafted in Italian and English and it was distributed on occasion of the Final Conference (Annex MTA20).

6.1.14 Action D2: Networking and Replicability

Starting date: 1st of April 2019 (as expected)

Ending date: 31st of March 2020 (as expected)

Beneficiary responsible for implementation: LEGAMB

Deliverable/Milestone name		Expected date	Effective Date	Annex
List of best practices	D	31.05.2021	31.12.2021	MTA 21
Handbook for replicability	D	30.09.2021	31.12.2021	MTA 21
Selection of 10/15 LIFE Projects	M	30.04.2019	30.04.2019	NA
Preliminary contacts with 6/8 LIFE Projects	M	31.07.2019	31.07.2019	NA

Start of the study visit*	M	30.09.2020	11.06.2021	NA
Selection of three best practices	M	31.04.2021	31.04.2021	NA
First National Seminar in Rome**	M	30.04.2021	04.12.2020	NA
Second National Seminar in Milan	M	30.06.2021	29.09.2021	NA
Third National Seminar in Naples**	M	31.10.2021	10.03.2022	NA
European Workshop (Green Week)	M	31.03.2022	05.12.2021	NA

*This milestone was substituted by a remote event. See below for further details

** This seminar was substituted by a remote event. See sub action B5.1, par 6.1.7 for further details

At the very beginning of the project, a preliminary list of **39 relevant LIFE and non LIFE projects** was drafted and successful contacts, meetings, joint events and exchange of information were taken with **26 of these projects**. The networking activities implemented during the project duration are reported in the table below (Tab 10):

N	PROJECT NAME	DATE	ACTIVITY IMPLEMENTED	PARTNER INVOLVED
1	LIFE SAM4CP	Jan 2019	Emails exchange for the implementation of the action A2	CREA, ISPRA
2	IUCLAND	22.01.2019	Participation in the workshop “Land Degradation: Overview of international approaches and knowledge sharing” organised by the FORMIT foundation within the project IUCLAND	LEGAMB, ISPRA
3	SOS4LIFE	22.12.2019 Dec 2019 24.09.2020 29.03.2021	Attendance at the workshop “ <i>Contrastare il consumo di suolo: esperienze, norme e linee guida</i> ” organized in the context of the project SOS4LIFE (Bologna, Italy, in person meeting) Exchange of information for the creation of the Edu-kit addressed to students (action B5.2) Remote Bilateral meeting Invitation by the Soil4Life project to the remote event “ <i>La carta della permeabilità di Roma capitale</i> ” (see below)	ISPRA LEGAMB LEGAMB, ISPRA ROMCAP, ISPRA
4	LANDSUPPORT	January 2020	Organisation of the joint event “Soil Day” (cancelled due to the sanitary	LEGAMB, ISPRA, CIA, CREA

		10.06.2020 15.09.2021 08.12.2021	emergency) Invitation at the first preparatory seminar organised within the action B5 (see par 6.1.7) Invitation by the Soil4Life project to the remote event Urban Promo Green (see below) Participation in the remote event organised by the project LANDSUPPORT “Soil Health Networking Day”	LEGAMB POLIMI ISPRA
5	LIFE AGRICOLTURE	29.01.2020, 12.05.2020 10.06.2020 04.12.2020 15.09.2021	Remote Bilateral Meetings Remote Bilateral Meetings Invitation by the Soil4Life project to the national seminar (see par 6.1.7) Attendance at the remote meeting “ <i>Un Green Deal per il suolo europeo</i> ” (see 6.1.7) Invitation by the Soil4Life project to the remote event Urban Promo Green (see below)	LEGAMB LEGAMB LEGAMB LEGAMB POLIMI
6	LIFE VIVACCADAPT	Sept 2020	Email exchange	ERSAF
7	LIFE HELP SOIL	Nov 2020 11.06.2021	Contribution and collaboration to the platform CIA per il suolo (see par 6.1.5) Invitation by the Soil4Life project to the LIFE Day event (see below)	CIA CIA
8	LIFE FORAGE4CLIMATE	04.12.2020 11.06.2021	Attendance at the remote meeting “ <i>Un Green Deal per il suolo europeo</i> ” (see 6.1.7) Invitation by the Soil4Life project to the LIFE Day event (see below)	LEGAMB CIA
9	SIEUSOIL	Jan 2021	Email contacts	LEGAMB
10	LIFE ADA	22.01.2021 11.06.2021	Remote Bilateral meeting Invitation by the Soil4Life project to the LIFE Day event (see below)	LEGAMB, CIA CIA
11	LIFE POREM	03.02.2021 Nov 2021	Remote Bilateral meeting Contribution and collaboration to the platform CIA per il suolo (see par 6.1.5)	LEGAMB, CIA, CREA, ERSAF CIA
12	GREATLIFE	22.03.2021 11.06.2021	Remote Bilateral meeting Invitation by the Soil4Life project to the LIFE Day event (see below)	LEGAMB, CIA, CREA, ERSAF CIA
13	LIFE BEWARE	16.04.2021 05.05.2021 05.06.2021	Remote Bilateral meeting Remote Bilateral meeting Joint participation in the EU Green Week and sign of a shared MOU	LEGAMB, ISPRA LEGAMB, CIA, ERSAF LEGAMB
14	LIFE PERDIX	07.05.2021	Participation in the remote scientific conference organised by LIFE PERDIX	ERSAF
15	DOMINO	11.06.2021	Invitation by the Soil4Life project to the LIFE Day event (see below)	CIA

16	GOI(E)MISSION	11.06.2021	Invitation by the Soil4Life project to the LIFE Day event (see below)	CIA
17	LIFE AGRESTIC	11.06.2021	Invitation by the Soil4Life project to the LIFE Day event (see below)	CIA
18	LIFE IP GESTIRE	11.06.2021	Invitation by the Soil4Life project to the LIFE Day event (see below)	CIA
19	NEWLIFE4DRYLANDS	08.07.2021	Participation in the remote conference “Remote sensing for monitoring land degradation and the assessment of NBS effectiveness” organised by the NEWLIFE4DRYLANDS project	LEGAMB
20	DIVERFARMING	14.07.2021	Participation in the remote conference “ <i>Diversificare in campo: nuove strategie sostenibili per la gestione dell'azienda agricola e dell'agri-business</i> ” organized by the DIVERFARMING project	LEGAMB
21	LIFE CHIMERA	31.08.2021 25.09.2021 03.11.2021 Nov 2021 17.03.2022	Remote Bilateral meeting Participation in the conference “Transforming waste into resources” organised by the two LIFE projects CHIMERA and POREM (Mompeo, Italy) Remote Bilateral meeting Contribution and collaboration to the platform CIA per il suolo (see par 6.1.5) Remote Bilateral meeting	LEGAMB, CIA CIA LEGAMB, CIA, CREA CIA ERSAF
22	Pro GI reg	15.09.2021	Invitation by the Soil4LifeE project to the remote event Urban Promo Green (see below)	POLIMI
23	SOIL HUB	22.11.2021	Remote Trilateral meeting (Soil4Life, SOILHUB,EJP SOIL)	LEGAMB, CREA
24	EJP SOIL	22.11.2021 10.03.2022	Remote Trilateral meeting (Soil4Life, SOILHUB,EJP SOIL) Involvement in the online webinar “Healthy policies for healthy soil: the Green Deal playing field” – organised by the Soil4Life project	LEGAMB, CREA LEGAMBIENTE, GI, CREA ISPRA, ERSAF
25	CLIMASOMA	13-15.03.2022	Participation at the final conference of the CLIMASOMA project (Appenzell, Switzerland)	CREA
26	I-SoMPE	16.03.2022	Participation at the final conference of the I-SoMPE project (Zurich, Switzerland)	CREA

Table 10: Networking activities carried out by the project’s beneficiaries

The 15th of September the seminar “*Per un uso sostenibile del suolo. Ricerche italiane ed europee*” organised by POLIMI in collaboration with ISPRA and LEGAMB within the initiative Urbapromo Green 2021 took place remotely. A total of 60 people took part in the seminar together with the representatives of the projects LANDSUPPORT, LIFE AgriColture and Pro GI reg. The initiative

represented an opportunity to compare the activities promoted by the Soil4Life with those developed in the context of other European projects dealing with the theme of soil starting from the presentation of the voluntary guidelines for technicians and professionals.

Moreover, on the 11th of June 2021 a specific “**LIFE Day**” meeting was organised by the CIA in collaboration with CREA, ERSAP and LEGAMB. The meeting was attended by the representatives of 8 LIFE Projects (Life Help Soil, Life Forage4Climate, Life DOMINO, Life GOI(E), Life AGRESTIC, Life IP Gestire 2000, GREAT Life, Life ADA). The meeting was an opportunity to share knowle and best practices about the protection of soil substituting in its purpose the study visits expected by the project, that was not possible to organise due to the restrictions imposed by the health emergency due to Covid-19.

The experiences, best practices and the lessons learned during the implementation of the Soil4Life project were collected in a **Handbook of Replicability** (Annex MTA21). The aim of this work is to illustrate, simply and effectively, the main initiatives carried out under the Soil4Life Project and, above all, to provide the practical tools to be able to be developed in other European areas and, in particular, in those countries where there is a major need to support local initiatives concerning the governance of the decision-making processes for soil protection. The Handbook of Replicability is available in Italian and in English.

Within the action D2 the **following events** were organised to promote the best practices achieved through the study pilots in Rome and in Lombardy region (see par 6.1.7 and 6.1.8 for further details):

- ISPRA: Presentation of the Permeability Map realised within the action B6 (XII international study day INU, 09.01.2021, remote meeting)
- ISPRA, ROMCAP: Presentation of the Permeability Map realised within the action B6 (“*Consumo di suolo in contesto urbano*”, 19.02.2021, remote meeting)
- ISPRA, ROMCAP: Presentation of the Permeability Map realised within the action B6 (“*La carta della permeabilità di Roma capitale*”, 29.03.2021, remote meeting)
- POLIMI: Presentation of the “Implementing Guidelines” realised within the action B6 (Urbapromo Green workshop, 15.09.2021, remote meeting, see before)

The organisation of the three national seminars and the participation of the Soil4Life representative at the EU Green Week were already described respectively in par 6.1.7 (action B5) and in the par 6.1.13 (action D1).

In the framework of the action D.2, CREA and ERSAP also produced the following **publications**, contributing in promoting the Soil4Life project and improving the applicability and transferability of the project results both at national and European level:

- Guidelines for defining the ecosystemic value of the soil relating to irrigated agricultural production, in an urban and peri-urban context. Filiberto Altobelli, Antonella Di Fonzo, Maria Grazia Piazza, Anna Dalla Marta, Sara Marinari, Andrea Martelli;
- In land set system and beyond: influence of soil management on water and soil conservation sewed up to variety of pedoclimatic environments and farming systems. Filiberto Altobelli, Marco Napoli, Anna Benedetti, Ronald Vargas, Giuseppe Corti (2020) Italian Journal of Agronomy, volume 15 issue 4;
- Improving soil and water conservation and ecosystem services by sustainable soil management practices: from a global to an italian soil partnership. F. Altobelli et al. (2020). Italian Journal of Agronomy volume 15 issue 4.

Finally, on the 22nd of April 2021 the Soil4Life project and the Permeability Map were presented by the **former Mayor of Rome** Virginia Raggi, during the photo contest award ceremony “*Obiettivo Terra 2021*” (Annex ATA9, Fig. 17).



Figure 17:: The Soil4Life project and the Permeability Map were cited by the former Mayor of Rome, Virginia Raggi

6.1.15 Action E1: Project Management

Starting date: 1st of October 2018 (as expected)

Ending date: 31st of March 2020 (as expected)

Beneficiary responsible for implementation: LEGAMB

Deliverable/Milestone name		Expected date	Effective Date	Annex
After LIFE Communication Plan	D	31.03.2022	31.03.2022	MTA22
Kick off meeting	M	31.10.2018	06.11.2018	NA
Establishment of the Steering Committee	M	31.10.2018	06.11.2018	NA
Establishment of the Executive Committee	M	31.10.2018	06.11.2018	NA

The **kick off meeting** of the project took place on the 6th November 2018 in Rome with the representatives of all the beneficiaries. During the meeting the **Steering Committee (SC)** and the **Executive Committee (EC)** were established and the administrative and technical representatives for each beneficiary were also defined. From the beginning of the project the following meetings among the SC components and among the EC components took place:

27.03.2019 meeting in person in Rome (LEGAMB's office);
 12.12.2019 remote meeting (Skype platform)
 05.05.2020 remote meeting (Teams platform)
 29.10.2020 remote meeting (Teams platform)
 10.05.2021 remote meeting (Teams platform)
 21.12.2021 remote meeting (Teams platform)
 22.03.2022 remote meeting (Teams platform, Fig. 18)



Figure 18: Screenshot of the last coordination meeting

During these meetings the update of the activities as well as their compliance with the expected timetable was evaluated and any criticality was discussed in order to define operative solutions. Moreover, several bi/trilateral meetings were held between the beneficiaries during the project lifespan for the implementation of the project's activities.

Four monitoring visits took place with the external monitor Mr Riccardo Giandrini respectively on:

First Monitoring Visit: 29.03.2019 in person in Rome (office of LEGAMB);

Second Monitoring Visit: 07.05.2020 remote meeting (Teams platform);

Third Monitoring Visit: 11.05.2021 remote meeting (Teams platform);

Fourth Monitoring Visit: 30.03.2022 in person in Rome (office of LEGAMB). On this occasion also Michel Quicheron, from the European Climate, Infrastructure and Environment Executive Agency (CINEA) attended the meeting remotely (Fig. 19).

Monitoring of both technical and financial progress of the project was carried out constantly through action E.2 which envisaged the production of quarterly reports. Thanks to a specially developed tool (**LIFE KPI webtool**) it was possible to follow step by step the state of implementation of the different actions for which the percentage of completion was calculated, as well as the compliance level with respect to the timetable. The first expected deliverable (**1st annual monitoring report**) was delivered at the end of October 2019 while the **second** and the **last** reports were delivered respectively on 31.10.2020 (Annex MTA23) and on the 31.10.2021 (Annex MTA24). The representatives of all the associated beneficiaries actively collaborated in the filling of the monitoring report

6.2 Main deviations, problems and corrective actions implemented

The Soil4LIFE project has encountered few problems during its implementation and all the expected results were achieved and, in some cases, also exceeded. In fact, some problems, namely the restrictions due to Covid-19 which prevented the organisation of in-person events, consequently mainly affecting the implementation of activities which expected the realisation of public events and/or meetings (say the action B3, B4, B5 and B8), unexpectedly had a positive effect in terms of achieved results (i.e remote events and remote training courses allowed us to reach more people than expected). For example, the training course organised within the action B4 e the CIA platform implemented within the action B3 allowed us to reach a higher numbers of professionals/farmers, in the meantime providing didactic products being available also after the end of the project. Similarly, remote conferences and seminars carried out within the action B5 were attended by more people than would have attended in person. Finally, the International Convention, organised within the action B8 (par 6.1.10) was initially intended to take place in UNESCO over one day, however due to the pandemic situation and the impossibility of booking rooms in UNESCO the decision was taken to go online. We believe that this decision actually enabled us to have a far richer final event than initially intended as not only did we have the conference which took place over three days on three different themes, we also had all of the supporting tools, such online communication, videos and the MOOC (online training course) on Earth Advocacy and Living Earth.

Within the action B8, the Soil Ambassadors also have been facing some challenges imposed by the Covid-19. For example, some of them suffered from the physical or mental issues, and some couldn't receive enough volunteer support as they were not able to travel or stay in the actions' locations for a long-term. Some ambassadors mentioned they couldn't get the support from the action place, or lacked of communication skills to carry out more impactful awareness actions among the general public. Despite all these challenges mentioned above, corrective measures were not needed and the Soil Ambassadors admirably took up initiatives and actions.

Another deviation with respect to the project proposal is constituted by the draft of an Inter-Ministerial Decree which has been proposed for officially starting the permanent consultation board foreseen under the action B1 (see par. 6.1.3). This national legal tool was not considered in the project proposal and it will constitute a strong impulse to national policy on soil consumption prevention and land restoration.

Moreover, as stated in par 6.1.8 as well as in the previous Midterm Report, it was not possible to include the Municipal Permeability Plan drafted in the context of the action B6 into the new Building Regulation of Rome, as expected by the project proposal, since the adoption of this document would require a time considerably longer than expected, being under an ongoing review process following Lazio regional regulation. Consequently, the achievement this result was slightly modified with the approval of a commitment aimed at inserting provisions to increasing the permeability levels of urban soils into the future Building Regulation of Rome

Finally, within the action B7 it was possible to organise the creation and management of the data archive without any project costs. Therefore, the unused budget was used to create short documentary videos and video lessons that highlight the techniques of using the different organic matrices as

evidence of “good examples” that can also increase the dissemination activity envisaged under action B3, also contributing to enrich the platform “CIA per il suolo” (see par 6.1.5). Moreover, in order to further enhance the activities carried out in the Lombardy pilot (see par 6.1.9), it was decided to use part of the budget for an analysis and evaluation service on the nutrient and nitrogen balance in the demonstration farms. This study was preparatory to a greater definition of the “Model of integrated management plan for farms” (Annex MTA11) to be proposed to farmers and a greater definition of the “Technical recommendations” (Annex MTA12) to be shared with regional institutions.

6.3 Evaluation of Project Implementation

In the Table below (Tab 11) the comparison between what is was expected by the project and what it was effectively realised is provided:

Action	Foreseen in the revised proposal	Achieved	Evaluation
A1	Objectives: definition of the executive planning of the project activities Expected results: Executive planning of the activities, Best practices research, Communication strategy	All the results were achieved as scheduled in the text project	The expected results were achieved without difficulties in compliance with the project schedule
A2	Objectives: analysis of software and existing models for the evaluation of the ecosystems services Expected results: Evaluation of the ecosystem services through a specific simulator. Cartography of ecosystem services provided by the soil in the current state of affairs and Cartography of ecosystem services provided by the soil in the various scenarios hypothesised. Report on the adaptation of the tool on the municipalities ‘territories of Rome and Milan	All the results were achieved as scheduled in the text project	The action has encountered some impediments due to the delay in delivery of necessary data provided by Rome Municipality and Lombardy Region. Consequently, the expected results were achieved behind schedule. Anyway this delay has not negatively affecting the implementation of other activities
B1	Objectives: increasing awareness of public administrations on soil issues Expected results: Institution of a Consultation Board. White Paper and Charter of Principles for Sustainable Use of Soil	All the results were achieved and also exceeded (i.e institution of a Consultation Board including 4 Italian Ministries; the Charter of Principles for Sustainable Soil Use was adopted by 24 local authorities, instead of 12 as expected by the project’s proposal).	The action has faced some delay in its implementation but this has not negatively affected the achieving of all the expected results. The after LIFE activity for the promotion of the Charter of Principles for Sustainable Soil Use has already started and 14 other municipalities, including the municipality of Rome, have already adhered to the Charter

			through an official declaration.
B2	<p>Objectives: creation of a regional network with the different departments involved in soil issues (Environment, Agriculture, Urban planning, etc.) in addition to regional agencies (ARPA/APPA).</p> <p>Expected results: 10 Regional Observatories</p>	All the results were achieved and also exceeded (15 Regional Observatories instituted instead of 10)	The action was successfully concluded without any relevant difficulty. The activities were not affected by the sanitary emergency since the meetings with the regional representatives occurred remotely.
B3	<p>Objectives: increasing awareness of farmers on soil issues</p> <p>Expected results: Voluntary guidelines for farmers, training courses, leaflet, brochure, application form to comply with the voluntary guidelines for farmers. Six Soil Days and one Soil Festival. Guidelines adopted by at least 5.000 farmers</p>	The results achieved through this action were slightly different than expected by the project proposal. 7.500 farmers were reached through the platform and 884 of them adopted the Guidelines. A not foreseen newsletter addressed to farmers was also created.	The action was successfully concluded but some changes were needed in its implementations due to the sanitary emergency. More precisely, in person meetings and local events (Soil Days) were substituted by remote events and the training courses addressed to farmers were substituted by a remote video platform.
B4	<p>Objectives: increasing awareness of technicians and professionals on soil issues</p> <p>Expected results: Voluntary Guidelines for professionals, Training courses (600-800 people involved) and Training Plan. Guidelines adopted by at least 600-800 technicians and professionals.</p>	All the results were achieved and also exceeded (3.328 technicians and professionals adopted the Guidelines, instead of 600-800 expected by the project).	The action was successfully concluded. Due to the pandemic, training courses were organised online and were attended by more than 7.800 professionals. The voluntary Guidelines have been published by INU Editions and have been subscribed by more than 3.300 professionals.
B5	<p>Objectives: increasing awareness of citizens on soil issues</p> <p>Expected results: Guide for teachers, Edu-kit on soil protection for students. Contest for students. Training course for teachers. 3 educational conferences organised respectively in Rome, Naples and Milan.. National Conference. 2 preparatory meetings organised respectively in Rome and Bruxelles. 5 European Forums. Final Dossier</p>	All the results were achieved as scheduled in the text project.	The implementation of this action strongly suffered for the situation caused by the sanitary emergency (i.e schools closure in Italy, prohibition to organise in person meetings) which has determined an important delay for the implementation of most of the foreseen activities. Notwithstanding these impediments, all the expected results of this action were reached and in person events were

			substituted by remote meetings.
B6	<p>Objectives: activities addressed to the Mitigation of soil sealing in the municipality of Rome</p> <p>Expected results: Permeability Map and Permeability Plan for the municipality of Rome. Guidelines. Future building regulation for the municipality of Rome. Constitution of the office devoted to soil protection</p>	All the results were achieved as scheduled in the text project with the only exception of the “Future building regulation for the municipality of Rome” which was substituted by the “Municipal Council Resolution deliberated” (see par 6.1.8 for further details)	The action was successfully concluded.
B7	<p>Objectives: Increasing awareness of farmers on ecosystem benefits provided by a sustainable management of soil, through the implementation of a pilot study on maintenance and reconstruction of organic matrix in agricultural lands</p> <p>Expected results: Report on Good Practices on the Use of Biomasses as Soil Conditioners, Report on the State of the Art for the Management of Waste Biomasses with Reference to the Situation in Lombardy, Cartography of Organic Carbon in Soil, Cartography of Agriculture and Extra-Agricultural Biomasses, Model of integrated management plan for farms, Technical recommendations.</p>	All the results were achieved as scheduled in the text project.	<p>The action ended in line with the times. concluded the two survey campaigns and achieved all the project objectives.</p> <p>The applied methodology allowed us to assess the efficiency of the tested practices in terms of environmental and economical sustainability. The results highlighted the key role played by the use of organic matrices as fertilizers and the importance of their proper use within integrated fertilization plans. They also demonstrated the value of the methodological approach applied to disseminate the importance of using quality material effectively useful for agriculture and therefore the need for a “cultural evolution” of the farmer role based on his ability to evaluate and enhance each agronomic practice according to its specific long-term effects on the environmental and ecological equilibrium of the soil.</p>
B8	<p>Objectives: Strengthening of capacity building of local youth organisation to help them to develop local awareness campaigns</p>	All the results were achieved as scheduled in the text project. 29 Soil Ambassadors were trained. Moreover, a	This action has encountered some delays in its implementation due to circumstances with Covid-19. In particular, the

	Expected results: Communication Toolkit, Training Course, Manifest on Soil, Global Communication Campaign	MOOC not expected by the project proposal was created.	starting date of the local campaign was postponed by one year.
C1	Objectives: assessing the achievement of project objectives Expected results: Ex-ante Report on Italian public knowledge, Soil governance indicators table,	All the results were achieved as scheduled in the text project.	The action was concluded without relevant difficulties.
C2	Objectives: assessing the socio-economic impact of the project Expected results: Ex ante monitoring Report, Ex post monitoring Report	All the results were achieved as scheduled in the text project.	The action was concluded without relevant difficulties
D1	Objectives: Increasing awareness of general public on soil protection Expected results: visual identity, website and social network; communication materials (notice boards, roll-ups, posters, promo cards, stickers and gadgets). Press conferences. Media relations. Press releases and articles. Three editions of the events Together4Soil. Participation in conferences and seminars. Final Conference	Most of the results were achieved as scheduled in the text project, with the exception of the Soil Brochure, the 10 videos and the Press Tour which were postponed. Due to pandemic restrictions regarding mobility the foreseen press tour has been replaced by a journalistic video reporter The first press conference was held on the occasion of WSD 2018 (05.12.2018), while the final Conference took place in Rome on 29.03.2022. Three editions of the event Together4Soil took place yearly in Rome and Milan. 26 press releases were drafted and more than 198 articles referring to the Soil4Life project were collected. The project website was visited by 15.000 people.	The action successfully concluded without difficulty.
D2	Objectives: Exchange of experiences and good practices with other projects Expected results: List of best practices, handbook of replicability, study visits, 3 seminars organised in Rome, Milan and Naples	All the results were achieved as scheduled in the text project, but the study visits and the 3 seminars were substituted by remote events due to health emergency situation. A list of 39 relevant projects was drafted and successful contacts and exchange of information were taken with 26 of them. The	The action successfully concluded without difficulty.

		Handbook of Replicability was drafted and printed in Italian and English.	
E1	Objectives: Proper management of the project Expected results: Kick off meeting. Coordination meetings. Monitoring visits. Institution of SC and EC. After Life Communication Plan	All the results were achieved as scheduled in the text project.	The action successfully concluded without difficulty.
E2	Objectives: Proper monitoring of the project's activities Expected results: Three yearly monitoring reports. LIFE KPI webtool	All the results were achieved as scheduled in the text project.	The action successfully concluded without difficulty.

Table 11: Comparison between expected and achieved results

6.4 Analysis of benefits

6.4.1 Environmental benefits

In the short term, direct environmental benefits will be achieved in particular through the results obtained by the actions B3, B4 and B7. The 43 technicians trained in the context of the action B3, as well as farmers who have received the assignment of “Soil Custodian”, can promote the voluntary guidelines for farmers by disseminating the achieved knowledge on conservative agronomic practices more sustainable from an ecological point of view. The dissemination of conservative and sustainable soil management practices, that promote the storage of organic matter, the increase the viability and resilience of agro-ecosystems and the reduction of biodiversity loss, can make a significant contribution to the development of effective mitigation strategies for greenhouse gas emissions and adaptation to climate change.

At the same time, the professionals (architects, urban planners, engineers, agronomists, geologists) attending the training courses organised through action B4 can start to apply the strategies and methods for soil protection and its sustainable management in their professional activity. It should be emphasised that with the initial target of the action foreseeing the voluntary signing of the guidelines of 600/800 professionals, the organisation of the 3 cycles of training meetings carried out in the above-mentioned way witnessed the participation of about 7,800 professionals with more than 3,000 signing. To this, there should also be added the results which will come from the organisation of the final seminar and the use of the FAD asincrona for the cycle of recorded meetings. Therefore, it is expected that the impact of this activity on a more sustainable urban planning will be higher than expected in the project proposal.

The Reports produced by ERSAP in the context of the action B7 provides exhaustive reference recommendations for the the maintenance and reconstruction of organic matrix in agricultural lands, with a consequent positive effect on soil management and preservation, not only into the four farms involved in the pilot study but also in the nearby farms. Moreover, the results achieved within the action B7 disseminate the importance of using quality material effectively useful for agriculture and therefore the need for a “cultural evolution” of the farmer role based on his ability to evaluate and enhance each agronomic practice according to its specific long-term effects on the environmental and ecological equilibrium of the soil.

Finally, it should be stressed that the deliverables drafted within the action B6 of the Soil4Life project, contributed to the definition of the PAESC for the Municipality of Rome, providing useful references

for the elaboration of this fundamental planning tool which aims at defining a long term strategy to counteract the effects of the climate change involving all sectors of the urban organisation.

The Soil4Life project also provides indirect qualitative environmental benefits through the adaptation of the simulator developed within the LIFE project SAM4CP (see action A2, par 6.1.2). In fact, such simulator can allow territorial decision makers to include the ecological functions of soil within the assessment of the environmental and economic costs and benefits associated with urban planning and land-use measures and choices, increasing the awareness of the institutions and citizens on the importance of sustainable urban development approach and planning. In addition, the permeability map realised in the context of the action B6 provides an urban planning tool useful in identifying the most critical urban areas depending on soil permeability level thus contributing to a more sustainable management of urban soils.

6.4.2 Economic benefits

The project will generate significant socio-economic effects at both the micro and macro level due to its interdisciplinary actions. First of all, awareness increase by the agricultural sector about threats looming above the soil as well as the increase of knowledge on agronomic conservative practices of soil will have a positive effect on soil quality and, consequently, will lead to an improvement of the conditions of this sector from an economic point of view. Drawing attention to the importance of managing the soil in an appropriate manner, the project will also favour the development of green jobs related to soil management and protection. Finally, contributing to improving sustainable land planning and management in order to reduce hydrogeological risks, the project will promote, in the medium-long term, economic benefits related to the lower costs for Public Administrations (Regions, Municipalities) to compensate damages caused by these phenomena. Finally, in the context of the project, other economic benefits were also provided by the opportunity to guarantee 14 full time and part time new job positions for several beneficiaries (LEGAMB, POLIMI, ISPRA, CCIVS, CIA, GI).

6.4.3 Social benefits

The project is producing social benefits too, in particular through the direct involvement of young generations. In fact, the increased awareness of young farmers in adopting more sustainable agricultural practices, as expected by the adoption of the voluntary guidelines for sustainable soil management (action B3), will favour a growing social responsibility in the new farmer's generations. Moreover, the creation of a network of Soil Ambassadors, trained by CCIVS in the context of the action B8, the collective draft of the Manifest and the possibility to share ideas/experiences through a specific blog will create the basis for a more aware environmentalist young generation with a new way of perceiving common goods and with a strong interest in stressing the importance of the protection and management of soil. It's worthy pointing out that the workflow of the Soil4Life project and the follow-up mechanism have a great impact on the Soil Ambassador. It greatly facilitated and encouraged their activism in peace and the environment. For example, 67% of the Soil Ambassadors have used the Soil Management Toolkit in their actions or projects, and 78% of them have joined the free online CCIVS iLearn courses 'Everything Gardens ' or the 'Basics of Bioconstruction'. All of them have read and signed the Soil4Life Manifesto and are willing to keep informed about future actions related to soil conservation and preservation from CCIVS or the project partners.

Moreover, through the local actions implemented by the IVS organisations and the Soil Ambassadors (see par 6.1.10), the actions coordinators and stakeholders have observed some positive changes and impact, namely:

1. young volunteers were motivated to join other actions camps on climate action and environmentalism, and some were more capable and prepared in delivering environmental workshops for the young people among their local communities;

2. the participants and their networks of families, friends and local communities displayed an enhanced awareness and knowledge regarding peace and the environment and such a change also got reflected in their daily behaviour.
3. the international voluntary service approach was introduced into more communities;
4. stronger partnership and synergies were development among the stakeholders, including hosting organisations, local communities and local authorities, and they showed more willingness in participating / cooperating / initiating actions on environmental issues;
5. the successful experiences of the local action served as a good practice and opened up new partnership and project opportunities in other local communities;
6. a learning process for young people to address and advocate environmental issues they are concerned about through concrete actions.

Finally, the results achieved within the action C2 (par 6.1.12) shows that among the most important contributions that are recognized to the project is the increased level of awareness of the environmental benefits that are associated with the adoption of sustainable land management practices. The commitment to disseminate this knowledge to agricultural operators is particularly appreciated, because of the difficulty to achieve this target group by dissemination actions on environmental issues.

6.4.4 Replicability, transferability, cooperation:

Several initiatives carried out under the Soil4Life Project were identified as a good opportunity for replicability and transferability in other cities/countries in particular, in those cities/countries where there is a major need to support local initiatives concerning the governance of the decision-making processes for soil protection. All these initiatives are described and explained in the Handbook of Replicability drafted within the action D2 (Annex MTA21, see par 6.1.14).

The sanitary emergency due to Covid-19 has highlighted the soil and agriculture problems in Croatia, and the interest for those topics has grown significantly in that period. That gives space for future cooperation and transferability, especially in the frame EU funded projects. Soil4Life project has been presented to the network of Croatian environmental organisations, counting approx 30 organisations, the biggest in the Country included. None of them ever proposed or realised a project on soil or agriculture. There is no knowledge which would enable them to submit such a project, and the Soil4Life national forum organised in Zagreb in November 2020 given the opportunity for the knowledge transfer and cooperation development.

The brochure created by ISPRA on soil importance, problems affecting it and protection measures, was translated in Croatian by GI, thus facilitating its diffusion in a country where soil-related problems are still poorly perceived. This is very important for the transfer of knowledge. Soil4Life project will introduce among the civil and academic society as well as practitioner's society the idea of contamination of cooperation, and is offering practical examples of activities to replicate in the Country where no such activities ever occurred. Similar outcomes are expected in other Countries too, where national forums were organised. During the project execution the transfer of knowledge already occurred.

Finally, through the action D2 (par 6.1.14) was possible to come into contact with other realities at national and international level and start collaborations with other projects (i.e sharing of methodologies for the recovery of the organic matter with LIFE Chimera, sign of a Memorandum of Understanding with the project LIFE Beware) that will continue even after the end of the Soil4Life project.

6.4.5 Best Practice lessons:

During this Soil4Life project implementation some good practices have been identified:

- Elaboration of an online platform (*CIA per il suolo*) through which inform and sensitize the farms on the need to adopt sustainable agronomic practices (action B3);
- Activation of a participatory process (Forum) involving representatives from different areas of expertise (action B4);
- Elaboration of an “Urban Resilience Design Strategies” (action B6);
- Promotion of a “cultural evolution” of the farmer role based on his ability to evaluate and enhance each agronomic practice according to its specific long-term effects on the environmental and ecological equilibrium of the soil (action B7);
- Establishment of a Network of Soil Ambassadors to share and connect local actions and forms part of the creation of the Soil4Life Manifest (action B8);
- Active and constant social media communication and creation of a social media community (action D1);
- Implementation of flash mobs to draw attention of general public on soil consumption caused by cementification (action D1)

6.4.6 Innovation and demonstration value:

The national board on soil consumption issues (action B1) is an innovative aspect and represents an important step towards Italian national law for limiting soil consumption and land degraded restoration. A similar process occurs at local level with the institution of regional observatory; the participation of different divisions (environment, landscape, agriculture, etc.) within each region occurred with certified email. At the end of the project Valle d’Aosta region formalised the adhesion to the Charter of Principles for Sustainable Soil Use and the Regional Observatory with an official resolution of regional council (DGR n. 384/22).

The project involved different kinds of stakeholders to increase their awareness on soil conservation. The activities implemented through the participatory process (Forum), related to action B.4, are expected to provide a shared framework for both professionals and public administrations technical personnel or decision makers. The debate involved representatives from different areas of expertise and research. The process has been organised in a sequence of steps and a shared document - the voluntary guidelines for professionals - has been defined. In this framework, each of the eight main strategies that make up the guidelines aims to underline the possible overlap between different expertise in soil management. The purpose of the document was to promote cooperation between professionals working in different fields and to share good practices and technical tools or references to be applied to improve sustainable soil management at different levels. This cooperative approach characterised the guidelines contents as well as the entire process aimed at defining them through the Forum activities and sharing their principles through the training activities. The participatory process was a key element to activate a productive exchange of knowledge also between researchers and professionals. At the same time, the involvement of professional associations at the national level was strategic to ensure maximum sharing of the guidelines even after the conclusion of the project. A qualifying aspect of the action was that of forcing technicians, administrators and professionals to an interdisciplinary exchange and training, aimed at generating a sharing of issues that generally escape the exercise of their respective professions and specialisations. The message transmitted is that soil is a transversal medium, in which choices made according to specialised visions and precise purposes must take into account potential effects and externalities, capable of affecting soil health and modulating its response in terms of supply of ecosystem services. This is why it is necessary to share

languages and awareness that go beyond the horizons of individual disciplinary formations and require a capacity for horizontal interaction between experts.

One of the main objectives of sustainable management of agricultural soils is the ability to promote the maintenance, and possibly stimulate the increase, of the organic matter content, thus contributing to the mitigation of climate change and better adaptation to its effects. This objective can be achieved through the integration between different best practices; this innovative approach requires to increase the awareness of stakeholders towards these issues in order to lead to a “cultural evolution” considering the long-term effects of each agronomic practice on the environmental and ecological equilibrium of the soil. Within the project, the Pilot in Lombardy, characterised by extremely intensive management of agricultural soils, allowed to highlight practically the benefits of the sustainable application as fertilisers of quality organic matrices of zootechnical and extra-agricultural origin in terms of ecosystemic services and the importance of their proper use within integrated fertilisation plans.

6.4.7 Policy implications:

In Italy a specific law on soil conservation is still lacking, although many proposed texts have been under discussion since many years by the national Parliament, consistent with the European Policy targets for soil preservation and restoration. In this context, the project Soil4Life, through the institution of the Special Soil Protection Office (see action B6, par 6.1.8), is starting to contribute in improving the governance of the decisional processes related to soil conservation at local scale. In fact, the SSPO aims at promoting projects and thematic maps addressed to soil quality assessment as well as information related to the interaction between human activities and the environment.

Moreover, the Inter-Ministerial Decree being proposed by the MITE for officially starting the permanent consultation board (see action B1, par 6.1.3), was not considered in the project proposal but it could constitute a strong impulse to national policy on soil consumption prevention and land restoration, also allowing the opportunity to bring together several institutional subjects dealing with soil management but that usually do not confront each other. The Inter-Ministerial Decree proposal will be considered by the MITE also because the Government is working on a new law (“*Collegato Ambientale*”) that should also contain land take and soil sealing regulation. Moreover, the two documents elaborated within the action B1 (the Charter of Principles for Sustainable Soil Use and the White Paper) represent a first step in paving the way for the national institutions to develop legislation on soil protection.

In addition, in May 2022, the Soil4Life project was selected as a concrete example to identify operational priorities to address future sustainable development policies in Italy in an increasingly consistent way, in accordance with adaptive strategies to climate change.

As regards Croatia, in May 2019 the Croatian Ministry for Agriculture organised a public consultation on the Regulation for the protection of agricultural soil from contamination. GI was the only Croatian NGO participating in the consultation as a representative of the Soil4Life project, since there is no environmental NGO dealing with soil and agriculture themes in Croatia, no knowledge at all. In April 2019, before the European Parliament election, Croatian environmental NGOs, gathered in the Green Forum network, prepared a Declaration for Sustainable Europe and sent it to the MEP candidates and parties. The chapter 15 on the importance of proper soil management policies was edited by GI with the support of LEGAMB, within the context of the Soil4Life project.

At EU level, it should be noted that both the first draft and the final Position Paper were shared with all the contact networks interested in the soil topics, who were asked for their support, and were used in bolstering the participation in the European Consultation for the new Soil Thematic Strategy (April 2021) and the subsequent consultation on the Soil Health Law (February 2022). The forums and seminars organised within the sub-action B5.3 (see par. 6.1.7) witnessed a wide participation involving more than 1.000 people. These forums provided the opportunity to tackle the theme of soil also for organisations from countries, such as Greece or Croatia, where it is rarely dealt with and

facilitating a fruitful discussion on a topic of collective interest, but on which there is a general delay in the development of strategies by civil society. The network of civil society organisations activated by the actions of the Soil4Life project to address consultations on new European soil policies will remain active also in subsequent developments, with particular reference to the official consultations on the Soil Health Law and the awareness-raising actions necessary to accompany and support the related institutional pathway.

Moreover, Mr Damiano Di Simine, the scientific responsible for the project Soil4Life, has been appointed as consultant in order to provide his suggestions on the soil strategy to the European Economic and Social Committee.

Finally, on the 22nd of April 2021 the Soil4Life project and the Permeability Map were presented by the former Mayor of Rome Virginia Raggi. The direct involvement of the Mayor of Rome in supporting the Soil4Life project and its products, although being an outgoing Mayor, is surely a good premise for the application of the planning indications provided through the pilot study in the Municipality of Rome (see par. 6.1.8), as well as for the transposition of such guidelines and indications into the future urban Building Regulation.

7. Key Project-level Indicators

The final actual values of the KPIs for the Soil4LIFE project were entered and updated in the online KPI database (<https://webgate.ec.europa.eu/eproposalWeb/kpi>). All the reported values are consistent with the environmental, economic and social benefits reported in the preceding section.

In the table below (Tab 12) an analytical comparison with the targets at the beginning and the end of the project is provided:

KPI		Project's start value	Project's end value	Comments
Partial reduction of specific pressures/threats affecting the spatial extent of the project in comparison to the present level		0 Km ²	14 Km ²	Area of surface affected by the pilot study into the Lombardy Region (see par 6.1.9)
N° of persons who changed their behaviour or practices due to the project actions		0	4212	Numbers of Farmers and professionals which have signed the LLGGs for soil conservation drafted within the project
N° of persons who may have been influenced via dissemination or awareness raising project-actions (reaching)		0	20.000	General audience reached through project events, seminars, conferences, flash mobs and website.
Soil organic matter		6520 Km ²	6.506 Km ²	Extension of areas with low levels of organic matter. This

				value decreased thanks to the involvement of farms in the pilot study into the Lombardy Region (see par 6.1.9)
Involvement of non-governmental organisations (NGOs) and other stakeholders in project activities	Stakeholders at EU level	0	700	Number of people attending the international forums
	Volunteers at EU level	0	650	Numbers of volunteers involved in the local campaigns and signing the Soil Manifest
	Public bodies in Italy	0	35	Numbers of representatives of the regional/national administrations involved in the governance activities and signing the Charter of Principles
N° of visit to the project website		0	15.000	
N° of information products/material	Reports	0	15	Numbers of reports/documents produced within the project (i.e LLGGs, Soil Manifest, Position Paper, White Paper, Charter of Principles, Replicability Plan, technical documents)
	Articles	0	204	Numbers of articles Articles mentioning the Soil4LIFE project
	Videos/Broadcasts	0	30	Numbers of videos and broadcast produced within the project and/or videos referring to the project
	Informative materials	0	10	
N° of people surveyed about environmental/climate problem addressed		0	5.500	Numbers of people reached through the actions C1 and C2. The targets of the surveys are citizens, volunteers, professionals and