



LIFE Project Number
<**LIFE14 CCM/GR/ 000635**>

Progress Report¹
Covering the project activities from 16/07/2015² to 30/04/2016

Reporting Date³
<**29/07/2016**>

LIFEPROJECT NAME or Acronym
<**LIFE CLIMATREE**>

Data Project

Project location:	
Project start date:	<16/07/2015>
Project end date:	<28/06/2019>
Total budget:	€ 1.931.447
EU contribution:	€ 1.158.868
(%) of eligible costs:	60%

Data Beneficiary

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¹ Progress Report without any payment request (for Progress Reports with payment request, use the Mid-term Report template)

² Project start date in the case of the first Progress Report, otherwise date since the last reporting period

³ Include the reporting date as foreseen in part C2 of Annex II of the Grant Agreement

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1. Executive summary

1.1 General Progress

CLIMATREE Project was officially launched the 16th of July following the signature of the Grant Agreement which was done at the 10th of July. CLIMATREE's main objective is the development of an integrated and sound approach for the calculation of tree crops' carbon sequestration with emphasis in Southern Europe. During the first months of the Project all necessary preparatory Actions (A.1, A.2, A.3) commenced according to the timetable. Action A.1 focused on the selection of critical parameters underlining the categorization of the tree crops. The following parameters have been identified: Tree-crop biology, Number of Hectares in cultivation, Cultivation Measures, Productive years of Plantations, Crop Yield. Regarding Action A.2 a collection of the most important variables concerning the soil C changes in relation to cultivation methods and agricultural management options, was implemented along with the requirements and the settings of the Land Use, Land Use Change and Forestry (LULUCF) methodology. Action A.3 provided a synthetic report analyzing the climatic, socioeconomic and environmental parameters related to the dominant and representative tree-crop cultivations in Greece, Italy and Spain. Key indicators and variables have been defined and estimated. Specific attention has been attributed to the various socioeconomic parameters of tree crops in Greece, Italy, Spain and Cyprus, (Gross and Net Production Value, Producer Price, Employment and Imports and Exports quantities) as well as the implications of Common Agricultural Policy (CAP) for tree crops in the recent years. Lastly, Actions C.1 and C.2 have just started. A preliminary planning has been done for Action C.1 and in the frames of Action C.2 simulations of the climatic condition have been implemented using the NASA GISS GCM ModelE.

The official kick off meeting of the Project (7th and 8th of October 2015) as well as the LIFE Climate Change Mitigation Projects Brussels kick off meeting (23/10/15) clearly indicated the policy response of both the European and National levels. CLIMATREE partners adopted a strategic plan for the exploitation of CLIMATREE's scope and outcomes in upcoming National and EU policies emphasizing on the upcoming DG CLIMA policy for the preparation of a legislative proposal on the effort of Member States to reduce their greenhouse gas emissions to meet the European Union's greenhouse gas emission reduction commitment in a 2030 perspective in the agricultural and land use sectors. A communication has been established with EU Authorities, National Ministries (Environment and Agriculture), and other relevant experts and consultants. The development of the project's key actions (C&D sets of Actions) along with the consultation with the relevant National Ministries, are expected to lead to the inclusion of tree crop cultivation in the updated "Greenhouse gas Monitoring Mechanism Regulation (MMR)". Towards this objective the project's scope, action plan and expected outputs were presented to various stakeholders in order to synchronize CLIMATREE with the National Strategic Priorities for the Reduction of Greenhouse gas emissions, particularly in relevance with the update of the LULUCF framework. However, in this reporting period, Greece has been adopted as the experimental case for developing the necessary network that may exploit the policy potential of CLIMATREE. The Greek network will be suitably modified and applied to Italy and Spain within the next reporting period. The overall Dissemination and Networking Strategy as well

as the detailed material of meetings and other dissemination strategy are clearly articulated in Annexes E.3 & F.3.

Regarding Actions E.1 and E.2 the official project's logo was prepared and the website of CLIMATREE was launched (www.climatree.eu). In the frames of Action F.1 the official kick off meeting took place at the 7th and 8th of October in the premises of the Agricultural University of Athens (see also Annex E.3 for the complete agenda and minutes). In addition, a standard process of communication was established between UEHR (Coordinating Beneficiary) and all the other CLIMATREE associated beneficiaries in order to secure the timely preparation of the main financial and managerial files (Timesheets, Stamp) as well as regarding the financial reporting schedule. The QA/QC manual was also launched (Action F.2). In the frames of Actions F.3, CLIMATREE project has been networked to several other projects and has already established important collaborations with two relevant LIFE Projects (LIFE Olive Clima Project and with LIFE Organiko Project).

As far as the After Life potentials of the project probably it is too early for an operational plan. The Project's outcomes wish to influence the orientation of the Common Agricultural Policy towards the adoption of cultivation methods with high positive environmental and climatic effects. These effects should be clearly accounted and articulated in the national CO₂ accounts. In this respect, the extreme uncertainty that burdens today the relevant accounts will be substantially reduced and the relevant policies will be based on a solid monitoring.

1.2 Assessment as to whether the project objectives and work plan are still viable

The Actions and deliverables are in line with CLIMATREE's official timetable therefore no deviations are expected from the foreseen implementation plan. A minor extension (explained below) of Actions A.1 & A.3 is not expected to cause any discrepancies in the project's progress. Therefore, the project objectives and work plan should be regarded as valid and still viable.

The timing of CLIMATREE is suitable for the support of the climatic policies at the European and National levels. DG CLIMA is preparing a legislative proposal on the effort of Member States to reduce their greenhouse gas emissions to meet the European Union's greenhouse gas emission reduction commitment in a 2030 perspective, addressing also the greenhouse gas emissions from agriculture and land use, land use change and forestry in the context of the 2030 EU climate and energy framework. A methodology that distinguishes the function of tree crops and suggests a robust CO₂ accounting system will support the essential application of the LULUCF Framework. Similarly, the outcomes of the project will support the inclusion or removals of emissions from land use, land-use change and forestry (LULUCF), currently not included in the Effort Sharing Decision of greenhouse gas emission reduction commitments up to 2020.

1.3 Identified deviations, problems and corrective actions taken in the period

Some delays have taken place in relation to the project initiation due to the severe dysfunction of the Greek banking system and the capital controls imposed in July 2015. A constant

communication was held between the Project Management Team and EASME in order to "normalise" the initiation of the project. Therefore, it was agreed to postpone the 1st Instalment until the start of September (9th of September) awaiting for the stabilisation of the banking operation. This delay did not cause any further problems as the partnership agreements between the coordinating beneficiary and associated beneficiaries were signed, and the transfer of the first 30% was executed according to the rules of the LIFE 2014 General Conditions.

No indications exist that the project is likely to stay behind its approved schedule and therefore no changes are foreseen to the baseline implementation programme.

2. Administrative part

The Institute of Urban Environment and Human Resources (UEHR) is the Coordinating Beneficiary of the project and the project management-coordination is performed by Prof. Dr. Kostas Bithas.

UEHR is responsible for the effective management of the project, the operational internal communication, the effective administrative and technical control of the project and the successful implementation of the Actions by providing support and guidance to the Associated Beneficiaries.

Four (4) Management Committees (Scientific, QA/QC, Financial and Technical) were assigned for the successful and effective project management. Each Committee consists of one representative by each CLIMATREE beneficiary, while they are coordinated by the Project Manager. The **Scientific Committee** monitors the implementation of the Actions, with scientific robustness and operational efficiency and transparency. The Financial Committee monitors the financial progress of the project and performs the necessary contacts with partners' financial departments. Each partner maintains an updated accounting system, in accordance with law and existing regulations of each country. The Technical Committee is responsible for all technical aspects of the project (definition of technical specifications for acquired equipment, market research, evaluation of technical offers etc.) and its demonstrative operation. The QA/QC Committee sets the procedures for the monitoring and control the various activities in order to ensure the best performance and the homogeneity of the methods and actions applied. A Quality Assurance / Quality Control (QA/QC) system is developed in order to monitor the progress of the implementation of the project.

During CLIMATREE's official kick off meeting (7th-8th October, 2015) the official setup of all Committees took place delineating the role of each committee towards the successful implementation of the Project. The exact procedures for the sound operation of each Committee were agreed. The scientific Committee agreed on a methodology for the control of deliverables, through an internal "reviewing" process which contributed to the successful completion of CLIMATREE's first deliverables. The role of Financial Committee was concentrated on the delineation of the financial procedures, the CLIMATREE's timesheets, accompanied by other relevant financial documents, which were agreed to be sent to the CLIMATREE Project Coordinator (UEHR) every 3 months following the adoption of the new template. The Technical Committee emphasized on the sound adoption of the new guidelines of LIFE's "General Conditions" and conformation with the Internal Guidelines of each Participating Partner. Lastly, the QA/QC Committee decided on the completion of the 1st QA/QC report by 12/2016.

Since the beginning of the Project, a constant communication has been kept among the Coordinating Beneficiary and the Associated Beneficiaries through emails, telephone contacts, Skype meetings, working groups and regular team meetings. (A full list of all the meeting and events that took place within the 1st reporting period can be found in the Annexes of Actions F.1 and E.3). This communication certifies the exchange of necessary managerial, administrative and financial documentation, the proper development of the project's progress and the production of the project's deliverables in line with the approved time schedule. All partners submit on a monthly basis their progress in line with the Actions which are under implementation. An aggregated report of all CLIMATREE's works for each month is then submitted to the External Monitoring Team of the Project. All Beneficiaries submit to the coordinating beneficiary the updated financial cost statement files and the respective documentation every 3 months.

3. Technical part

3.1 Progress per action

Action A.1. Selection and analysis of tree-crop categories in S. Europe

Foreseen start date: 16/7/2015

Actual start date: 16/7/2015

Foreseen end date: 30/11/2015

Actual end date: 31/3/2016

The action has been successfully completed. In the context of present action, the following two major tasks were implemented:

1. Literature review on the Ecosystems Services Assessment, which resulted in the provision of a generalized framework for the relative assessment of the ecosystem services of Tree Crops, along with a provisional set of potential indicators for the enumeration of Ecosystem Services.
2. The development of a methodology for the categorization of Tree Crops according to their biological and cultivation characters. This methodology has implicated the widely available knowledge along with nation-wide statistics elaborated to the municipality level.

The date foreseen for Action A.1 completion was postponed until the end of March 2016, as a consequence of the delayed beginning of the project implementation by AUA (due to capital controls and the summer period vacation). In particular, the AUA team involvement in the project was started immediately after the signature of the agreement by its vice-rector (16/9/2016). This delay did not affect the implementation of the other activities of the project, since the data needed for the other actions was timely provided, while the preceding action C.1. has started without delay.

The delay affected mainly the tree crops' significance on ecosystem function. This report was originally foreseen for 30/10/2015, and was finally produced in March 31st 2016.

All the action's objectives were fully achieved.

Action A.2. Adjustment of the “Land use, land-use change and forestry (LULUCF) Methodology” to the environmental problem targeted

Foreseen start date: 1/10/2015

Actual start date: 1/10/2015

Foreseen end date: 31/3/2016

Actual (or anticipated) end date: 30/4/2016

The Action A2 analysed the current methodology for monitoring and accounting of GHG emissions for the Agriculture Forestry Land Use (AFOLU) sector focussing the tree crops. Particularly current legislation package (EC Decision 529/2013) and technical Guidelines for National Greenhouse Gas Inventories issued during 2006 and 2014 by the Intergovernmental Panel on Climate Change has been analysed.

Based on the outcomes of that analysis, specific activities to be implemented within the aforesaid technical documents have been highlighted being a potential base for future update of the legislation.

Within the Action A2 a supporting study on the carbon budget in a peach orchard has been prepared and published in the international journal Agricultural Ecosystem Environment. This publication is annexed to the present Progress Report as single PDF file (Annex F.3.2) and would contribute to improve quantitative information on carbon stored in various stocks. The Action A2 summarizes current methodology for monitoring and accounting of GHG emissions for the Agriculture Forestry Land Use (AFOLU) sector with a focus on tree crops which are included in Cropland category. Key documents were analysed and possible improvements/adjustments of current methodology identified.

The Action A2 shed the light on potential of tree crops category to serve as carbon sink and provided examples on methodology to gather quantitative information on carbon storage in tree crop categories. Particularly, the Net Ecosystem Carbon Balance (NECB) methodology was adopted to account for both the natural capacity of tree crops to sequester carbon and the impact of the farmers' management actions.

The deliverable titled “Adjustment of the LULUCF methodology for a better accounting of mitigation cultural practices of agro-ecosystem” foreseen in this Action has been timely prepared and annexed to this Progress Report (Annex A.2).

This Action A2 has been completed accordingly to the Project schedule.

We did not have problems during the development of the Action A2. Results on methodology on carbon balance would be supportive for the following Actions:

- Actions C.3 – Interface development of software application
- Action C.4 - Carbon input/output calculation for current and future years
- Action C.5 - Suggestions and evaluation of climate change mitigation policies and measures.

The Dipartimento delle Culture Europee e del Mediterraneo: Architettura, Ambiente, Patrimoni Culturali (DiCEM) will fully support and interact with the others partner for the achievement of the Actions targets.

Action A.3. Analysis of climatic, environmental and socioeconomic parameters of tree-crop categories in S. Europe

Foreseen start date: 1/10/2015

Actual start date: 1/10/2015

Foreseen end date: 31/3/2016

Actual (or anticipated) end date: 31/5/2016

The Action A3 started on time (October 2015) and has been successfully completed. The Deliverable of the Action A.3: Analysis of Climatic, Environmental and Socioeconomic Parameters of tree-crop categories in S. Europe has been completed and is attached with the current progress report (Annex A.3).

Although the action started on time and it was planned to be completed on March of 2016, the extension of Action A.1 suggested a two month extension of Action A.3 in order to incorporate A.1 inputs in environmental parameters affecting tree crop cultivations. This extensions will not affect project continuation and will do not delay the implementation of other Actions. Since the action was successfully completed, and the deliverable has been completed, there is no continuation through the next reporting period.

All of the action's objectives (i.e., analysis of the climatic, environmental and socioeconomic conditions that affect tree crop cultivations in S. Europe) were achieved.

Action C.1. Life Cycle Assessment of carbon cycle in tree-crop categories

Foreseen start date: 1/4/2016

Actual start date: 1/4/2016

Foreseen end date: 29/9/2017

Actual (or anticipated) end date: 29/9/2017

The action implementation started timely on April 1, 2016. So far, we have implemented only the initial planning of the following major tasks:

1. Experimental documentation of carbon captured by selected tree-crops. In particular, the documentation will include the:
 - a. Carbon permanently captured by Plant Tissues (Above and Below ground)
 - b. Annual Carbon Flows, including Crop Yield, annual growth of Vegetation and Root
 - c. Carbon emissions as a result of the cultivation means.
2. Development of four Carbon Life Cycle Assessments, each one dedicated to the facts and individualities of the respective tree crop category.
3. Integration of the experimental data with nation-wide statistics in order to produce an annual per hectare carbon balance for each of the four tree crop categories

In this early stage no problems have been encountered. A potential threat for the actions' coherency may be connected with the possible differences among the agricultural practices used in the three countries. This threat relates to the differentiated cultivation measures applied for each crop, the machinery utilised, resulting thus to discrepancies between the three countries in relation to the carbon balance methodology. Nevertheless, the acquisition of statistical data from the national authorities precludes this risk, as all crops receiving the single payment scheme are considered to provide cross-compliance, which is considered a common baseline threshold for all EU countries. We anticipate to overcome this discrepancy through the application of CAP prerequisites concerning the cross-compliance with the EU established Good Agricultural Practices.

It is too early to comment on the course of action implementation. We anticipate that the action's progress will be in line with the following initial time schedule set in the proposal:

Milestone	Date
A complete list of the variables affecting carbon sequestration:	29/07/2016
Completion of literature-review:	30/09/2016
Assessment of Millennium Ecosystems Services	30/12/2016
Completion of field work	29/07/2017

Since the action has started one month ago it is not possible to estimate the requested indicators.

Action C.2. Projections of future climatic conditions for tree crop categories in S. Europe

Foreseen start date: 1/9/2016 Actual start date: 1/9/2016
Foreseen end date: 31/12/2017 Actual (or anticipated) end date: 31/12/2017

The Action C2 started on time (September 2016) and it is being implemented without problems or delays. The first milestone of the Action C2 (Completion of Global Climate Model simulations for current years) has been reached and the simulations are continued as scheduled.

For this Action two workstation specifically designed for the purposes of the project (i.e., climate and meteorological simulations) have been set up. The workstations have been setup explicitly for the simulations of the project. The workstations were upgraded and optimized to meet the needs of the project. The benchmark test performed at the beginning of the project showed that the same line of motherboards and CPU processors where necessary in order to increase the performance capabilities of the workstations. To benefit from the existing infrastructure of our lab a CPU processor and two motherboards were purchased. Moreover, given the strong dependence of the software on the installed memory, extra memory was purchased. Evaluation of the workstation's performance using a benchmark suite of simulations to demonstrate the correctness of computer simulations was performed.

The NASA Goddard Institute for Space Studies (GISS) ModelE Global Climate Model (GCM) has been set up. The model was evaluated for the correct installation using a benchmark suite provided by NASA that concerns both software testing and case testing. The software testing was done in order to verify that the compilers installed on the workstation and the model configurations provide a bit-for-bit reproducibility. The case testing was done to confirm code robustness and reasonableness through the running of specific simulations (12 in total). Evaluation was done by comparing the outputs of the code for all simulations carried out with existing plots of the selected simulations.

In order to obtain climatic information in a very fine scale the Weather Research and Forecasting (WRF) mesoscale meteorological model will dynamical downscale NASA GISS GCM output in S. Europe. The latest version of WRF mesoscale meteorological model has been set up along with the graphical software for visualization of the outputs. The WRF model installation has been tested using the "WRF Testing Framework" utility.

No problems have been so far encountered in regards to this Action.

The progress of the action is following the initial time schedule. The first milestone of the Action C.2: Completion of Global Climate Model simulations for current years has been

reached as scheduled (i.e., 30/6/2016). The simulations are continued as scheduled and the next milestones are presented in the following timetable:

<u>Milestone</u>	<u>Date</u>
Completion of Meteorological Model simulations for current years in S. Europe:	31/01/2017
Completion of Meteorological Model simulations for current years in S. Europe:	30/09/2017

In this Action the climatic parameters that affect tree crops cultivations for Europe for the period 2000 – 2060 as well as the average changes in the meteorological parameters affecting tree crops cultivations in S. Europe between current (i.e., 2008 – 2012) and future (i.e., 2048-2052) years will be assessed. So far, the Global Climate Model simulations for current years has been reached as scheduled (i.e., 30/6/2016). We will continue the simulations according to the schedule in order to estimate the changes in the climatic and meteorological parameters affecting tree crops cultivation in S. Europe in the future as well as the related uncertainties.

Action E.1 Creation of project's logo

Foreseen start date:	16/07/2015	Actual start date:	01/09/2015
Foreseen end date:	30/09/2015	Actual end date:	16/10/2015

The design of the project's logo started in September 2015 with a request for proposal to an external graphic designer. The signing of the contract was acquired on 18/9/2015 and a briefing of the designer took place about the logo and its basic required characteristics.

During the Kick-off meeting (7th – 8th of October 2015), a sheet with several questions was produced and distributed to the beneficiaries' representatives in order to incorporate the ideas and individual view of every one of them into the logo design process. These filled-in sheets were delivered to the graphic designer who created 5 alternative graphic designs of the project's logo. These 5 alternative logos were delivered to all project's beneficiaries and the final project's logo was selected. The LIFE CLIMATREE logo was developed in colour and greyscale format and is being used in all project deliverables, reports and dissemination materials.

No problems have been encountered for this Action. The design process of the logo was intentionally delayed for some days, until the Kick-off meeting, so as to take into account the ideas and individual view of all beneficiaries.

Action E.2 Development, launching and maintenance of project's website

Action E.2 Development, launching and maintenance of project's website is in progress

Foreseen start date:	16/07/2015	Actual start date:	01/10/2015
Foreseen end date:	28/06/2019	Actual end date:	In progress

The design of the website and the development of its content began in October 2015. The LIFE CLIMATREE website offers information about the project and its actions, the beneficiaries and the activities during the implementation of the project. In addition, it contains useful links, link to the official Facebook page and Twitter account of the project. The website is being maintained and will continue to be maintained and updated until the end of the project. Until 30/04/2016, 201 visits had been recorded. The website features the budget, EC contribution and an explicit acknowledgement to the support of the LIFE financial instrument of EU. More information about the website structure and analytics regarding the audience overview are presented in the E.2 Deliverable.

The website of the project was developed with some delay because the project initiated at the summer period and the gathering of the necessary data could not be collected during this period.

LIFE CLIMATREE website was designed, developed and launched at the following web address: www.lifeclimatree.eu. The website is maintained by TERRA NOVA with the contribution of all beneficiaries.

Action E.3 Dissemination of project's progress and results

Foreseen start date: 16/07/2015 Actual start date: 16/07/2015

Foreseen end date: 28/06/2019 Actual (or anticipated) end date: 28/06/2019

Dissemination strategy identifies two groups of potential stakeholders: a) decision and policy makers at the European and National levels in relation to climate and agricultural policies, b) Farmers and other agriculturally based stakeholders who in the sector of crop cultivations. At this reporting period the dissemination policy focused on the establishment of an effective communication with policy relevant stakeholders. We met at the beginning of the Project (23/10/15) with DG CLIMA in order to communicate the context of the project and to incorporate the current European legislation objectives into the project content. We also met with the Hellenic Ministry of the Environment in order to present the project and its potentials for supporting national climate policies. The Hellenic Ministry of the Environment organized a three part meeting with the national consultant in charge for the LULUCF. The consultant provided us with useful comments about the operational potentials of the project on the reduction of the uncertainty of the current accounting methods.

This early networking is a necessary action in order to incorporate the interests and the concerns of the policy relevant stakeholders within CLIMATREE. The dissemination actions make the first steps for networking with the second group of potential stakeholders: Farmers and agricultural based ones. The project's outcome will be communicated to them when available. At this early stage of the project we organized a meeting with the Ministry of Agriculture (7/4/2016) in order to present the project and to establish a close collaboration. In this meeting the national consultant responsible for LULUCF participated. As a direct result of this meeting, CLIMATREE established a tune for mining important data from the Ministry of Agriculture. The establishment of communication with farmers and associations is presented in Annex F.3. It must be noted that this activity will be constant throughout the whole project's duration.

The production of Informative leaflets and Posters is expected to be implemented on time.

No significant problems have been encountered for this Action

List of Milestones:

Establishment of communication with farmers and associations- 1/11/2015

Production of informative Leaflets- 15/07/2016

Production of informative Posters- 15/07/2016

Action E.4. Development of project's notice boards

Foreseen start date: 30/06/2016, 28/04/2017

Actual start date: 30/06/2016, 28/04/2017

Foreseen end date: 30/06/2016, 28/04/2017

Actual (or anticipated) end date: 30/06/2016, 28/04/2017

The installation of Notice Boards is expected to take place in 12th and the 21st months of CLIMATREE.

No problems are expected during the implementation of Action E.4

List of Milestones:

Design of Boards informative content: 29/04/2016

The draft designs of the Project's Noticeboards are presented in Annex E.4.

At least 10 Notice Boards are expected to be installed (at least) at the premises of each beneficiary.

Action F.1 Project management by UEHR

Foreseen start date: 16/07/2015 Actual start date: 16/07/2015

Foreseen end date: 28/06/2019 Actual (or anticipated) end date: 28/06/2019

The coordinator of CLIMATREE is the Institute of Urban Environment and Human Resources (UEHR). The Project Manager is Prof. Kostas Bithas. UEHR is responsible for the effective management of the project, the operational internal communication, the effective administrative and technical control of the project and the successful implementation of the Actions by providing decision-making, consultation and guidance to the Associated Beneficiaries.

Apart from the short delay in the instalment of the 1st prefinancing caused by the Greek banks dysfunction of the 2015 summer, no serious problems have emerged so far concerning the project management of CLIMATREE. As a result, for the time being the coordinator does not foresee any essential delay in the project's continuation.

CLIMATREE is a very demanding project with ambitious objectives concerning climate change and policy. The ultimate objective is to support essentially the legislation (LULUCF)

and accounting method of CO2. The effective matching of CLIMATREE actions with the relevant policy processes may require some reallocation of the budget among actions. These modifications, when occurred, will remain within the standards defined by the LIFE General Conditions Rules. These modifications ought to be seen as the necessary freedom for the effective implementation of the project.

List of Milestones:

- Kick Off Meeting- 20/7/2015
- Compilation of Inception Report- 29/07/2016
- Compilation of Mid-term Report- 31/03/2017

The Kick off meeting of the Project took place on a two day event the 7th and 8th of October 2015 following the signature of the Partnership Agreements within September 2015. The compilation of the inception report is being done according to the project's timetable, while the compilation of the Midterm report is also expected to follow the official CLIMATREE's timetable.

The Project Management team retains a constant communication all the participating Beneficiaries through emails, telephone contacts, skype meetings, working groups and regular team meetings in order to certify the successful implementation of necessary managerial, administrative and financial documentation, the proper development of the project's progress and the production of the project's deliverables in line with the approved time schedule. In addition, all partners submit on a monthly basis their progress in line with the Actions which are under implementation. An aggregate report of all CLIMATREE's works for each month is then submitted to the Monitoring Officer of the Project. What is more, all Beneficiaries submit to the coordinating beneficiary their financial progress and documentation every 3 months.

A full list of all the meeting and events that took place within the 1st reporting period can be found in the Annexes of Actions F.1 and E.3

Action F.2 Monitoring of project progress

Foreseen start date:	16/07/2015	Actual start date:	16/07/2015
Foreseen end date:	28/06/2019	Actual (or anticipated) end date:	28/06/2019

A Quality Assurance/Quality Control System was developed in order to monitor the progress of the implementation of the LIFE CLIMATREE project. A QA/QC Committee was established at the kick off meeting, the QA/QC manual was formulated by the Committee (Annex F.2). The Committee consists of one representative of each project beneficiary. Its role is to assist the task of project monitoring by completing and evaluating the corresponding report.

The first QA/QC Report of the Project containing the first update of the QA/QC indicators analysed in the QA/QC Manual (project milestones, deliverables completion, consistency with the project timetable, performed expenditures and consistency with the proposed cost breakdown) is expected to be finalised by the end of 2016 and will be submitted with the upcoming Mid Term report.

We have not encountered any remarkable problems for this specific Action.

List of Milestones:

QA/QC Manual- 30/09/2015
QA/QC 1st Report- 23/12/2016

The QA/QC Manual was prepared on time (September 2015) and can be found as an Annex F.2.

Action F.3 Networking activities with other relevant EU projects

Foreseen start date:	16/07/2015	Actual start date:	16/07/2015
Foreseen end date:	28/06/2019	Actual (or anticipated) end date:	28/06/2019

Since the initiation of the Project, CLIMATREE's team has applied a networking strategy with other relevant projects. The objective is to maximize the Operational Application of the project in the EU level by exchanging information and outcomes with other relevant projects. CLIMATREE project has already networked to several other relevant projects and has already established important collaborations with two other LIFE Projects (LIFE Olive Clima Project LIFE11 ENV/GR/000942 and with LIFE Organiko Project LIFE14 CCM/CY/000990). A full list of the networking activities can be found in Annex F.3. The networking with LIFE Organiko project contributed in the provision of tree crop categories data from Cyprus, which will be used in the following stages of the project. In addition, the networking with LIFE OliveClima established the dissemination of project's results to farmers' association in Crete and the exchange of economic data on olive tree cultivations.

We have not encountered any remarkable problems for this specific Action.

List of Milestones:

Detection of other relevant EU projects- 31/12/2015
Establishment of communication- 31/03/2016

The schedule of milestones has been followed according to timetable and the Action's implementation is expected to last until the end of the project and beyond it.

The networking strategy of the Project will be continued throughout the whole project duration and beyond it, seeking to maximise the potential of the Project to achieve its objectives. The detailed networking strategy plan can be found in Annex F.3.

List of Deliverables:

Detection of other relevant EU projects- 31/12/2015
Establishment of communication- 31/03/2016

Deliverables are attached within Annex F.3 of the present progress report

3.2 Envisaged progress until next report

The core task to be undertaken until the next report, Mid Term Report is expected by the end of March 2017, is the initiation and the first essential steps of the core Implementation Actions (C Actions) of the Project.

Specifically, regarding Action C.1:

C.1 is based upon all preparatory actions results, which will be incorporated into the investigation and weighting of the variables that determine the carbon sequestration capacity of each crop category.

A Life Cycle Assessment will be performed with respect to the parameters influencing the crops carbon consumption and storage, which will be defined according to the following timetables and procedures:

FIELD SAMPLING							
Crop	Biomass						
	Annual Production per plant			Stored in plant tissue		Crop by-products	
	Foliage	Crop	root	trunk	root	Cuttings	Crop residues
<i>Olea europaea</i>	Oct-16	Nov-16	Sep-17	Mar-17	Sep-17	Mar-17	-
<i>Amygdalus communis</i>	Oct-16	Oct-16	Nov-17	Jan-17	Sep-17	Jan-17	Oct-16
<i>Malus sylvestris</i>	Oct-16	Nov-16	Nov-17	Jan-17	Sep-17	Jan-17	-
<i>Citrus sinensis</i>	Oct-16	Jan-17	Sep-17	Mar-17	Sep-17	Mar-17	-
<i>Prunus persica</i>	Oct-16	Aug-17	Nov-17	Jan-17	Sep-17	Jan-17	-

FIELD SURVEY					
Crop	Cultivation				
	Machinery	Human Labour	Agrochemicals	Soil Cultivation	Irrigation
<i>Olea europaea</i>	Dec-16	Dec-16	Dec-16	Dec-16	Dec-16
<i>Amygdalus communis</i>	Dec-16	Dec-16	Dec-16	Dec-16	Dec-16
<i>Malus sylvestris</i>	Mar-17	Mar-17	Mar-17	Mar-17	Mar-17
<i>Citrus sinensis</i>	Jun-17	Jun-17	Jun-17	Jun-17	Jun-17
<i>Prunus persica</i>	Dec-16	Dec-16	Dec-16	Dec-16	Dec-16

FIELD SURVEY				
Crop	Biodiversity			
	Plants	Fungi	Insect	Animals
<i>Olea europaea</i>	Dec-16	Dec-16	Dec-16	Dec-16
<i>Amygdalus communis</i>	Dec-16	Dec-16	Dec-16	Dec-16
<i>Malus sylvestris</i>	Mar-17	Mar-17	Mar-17	Mar-17
<i>Citrus sinensis</i>	Jun-17	Jun-17	Jun-17	Jun-17
<i>Prunus persica</i>	Dec-16	Dec-16	Dec-16	Dec-16

Concerning Action C.2 simulations will be continued for NASA GISS GCM ModelE as well as the dynamical downscaling procedure using WRF model. The next milestone (31/01/2017) which is the completion of Meteorological Model simulations for current years in S. Europe, is expected to be reached successfully.

Action C3 has as a prerequisite the outputs of actions A1, A2 and A.3. Action A1 indicates the tree crops that will be included in this study and the cultivation practices that are used and

play an important role in carbon sequestration. A2 points out the variables and parameters influencing the carbon dioxide flow between the various pools used in modeling process, based on IPCC guidelines, while A.3 provides the main socioeconomic indicators related to tree crops.

C3 will start earlier on 1/7/2016 in order to exploit immediately the outputs of the actions A1, A2 and A.3 and specifically their impact on the choice of modeling method (Tier) and consequently the models available for the pools of Biomass, Dead Organic Matter and Soils will be examined. The orientation of action C3 will mainly focus on: a) the variables and parameters provided, b) the appropriate models available in literature and c) the IPCC guidelines. Until the 31/3/2017, the properties of the mathematical model will have been delineated, in terms of the C pools within the system, the flows of carbon into and out of the system, the method (Tier) used to model each pool as well as the parameters and variables captured in the model.

In the framework of Action C4, the output results of the previously implemented Actions (A1, A2, A3, C1, C2 and C3) will be used in order to estimate the Carbon Input/ Output related to the cultivation practices of the selected tree-crops in Greece, Spain and Italy for current and future years.

The dissemination of the project (Action E.3) will continue with the 1st set of CLIMATREE's leaflets and posters which are expected to be ready for print by the mid of July and will be distributed to relevant stakeholders and target groups accordingly (ministries, associations, farmers, etc). The progress of the Project will be communicated to media in the 3 countries through press releases, conferences, papers and interviews.

Furthermore, the translation of the website into the three beneficiaries' languages (Greek, Italian, Spanish) is ongoing and is expected to finish by the end of 2016.

Regarding Action E.4 The 10 Notice Boards are planned be installed in the premises of the Participating Beneficiaries and of the relevant stakeholders by the end of September 2016. In Action F.1 a working meeting among beneficiaries is expected to take place in Spain at October 2016. An additional project management meeting is planned for December 2016-January 2017 in Italy prior to the submission of the Mid Term report due at March 2017.

For the detailed Gantt Chart please refer to the attached excel file (CLIMATREE Progress Gantt Chart).

3.3 Impact

CLIMATREE is still at the preparatory phase and therefore there have been no actual mitigation results. However, it is worth mentioning that the potential mitigation impacts are expected in the next phases of the present.

The correct and precise accounting of CO₂ sequestration capacity of crops will be a substantial input to the climatic and agricultural policies.

Agricultural policies, among them and certain dimensions of the Common Agricultural Policy, will be assigned with a relatively precise climatic outcome - CO₂ value-. This would permit the development of an incentive mechanism reflecting the climatic and environmental

impacts as those described by the term of the "ecosystems payments" incentives. As a result, cultivation methods with substantial mitigation effect will be promoted.

On the other hand, climate policies will be enhanced with a more precise accounting methods and with a potential new instrument, the mitigation potentials of tree cultivations. This will promote the effective application of LULUCF as a climate policy option.

In this context, the outcomes of the project aspire to influence the Climatic and Agriculture policies at the European level.

DG Clima is preparing legislative proposals on LULUCF emission reductions and the outcomes of the project are expected to contribute towards this direction by providing a relatively precise accounting method for the CO₂ impacts of the tree cultivations. Towards this objective CLIMATREE's coordinator has contacted European and National Authorities related to the LULUCF application. Once the outcomes of Actions C.1, C.2 will be available these will be immediately communicated to DG CLIMA, and the European Legislation Bodies. That is a major reason why we established communication with DG CLIMA from the first months of the project.

On the other hand, decision makers in the agricultural policies at the European level have not been contacted yet. Relevant actions should take place once actions C1, C2, C3 will give the first results.

We would like to stress the potential for expanding the findings of the project to other countries such as China as relevant contacts have been stabilized and interactions have been articulated. This expansion may increase the global mitigation impact of the project. CLIMATREE was invited and presented in the meeting of "China's New Silk Road Strategy: Pathway to Green Growth for European and Chinese Strategy" in Paris (17/3/16). The interest of the Chinese authorities seems substantial.

3.3 Methodology that will be used for monitoring each of the project's indicators during the project's progress.

Three major indicators reflect the impacts of the project. The overall aggregate effects of the project depend on the land use coverage of tree crops conditioned by the respective cultivation methods. Scenarios analysis will take place under Actions C.3 and C.5 in order to evaluate the aggregate outcomes of the project concerning the below described key indicators.

Concerning the table of indicators two excel files are attached within the present report. The first file concerns the attached indicators table of the Technical Application Form and the 2nd file the updated validated table of indicators of the life.idom web database.

Two classes of indicators will be used for the performance of CLIMATREE. The first class concerns those indicators that reflect the influence of the project during its implementation period. The second class concerns the ultimate impacts of the project which can only be evaluated around the end of the project.

The first class includes: Website, Other tools for reaching/raising awareness of the general public, Networking, Jobs, Running cost/operating costs during the project and expected in case of continuation/replication/transfer after the project period. These indicators will be estimated and updated either on an annual, end of the project or a 3 to 5 years after the end basis according to the described plan in the project specific indicators excel file. The second class includes three main indicators: climate change mitigation, carbon sequestration and

resource efficiency soil and water. The methodology for monitoring these indicators is described below.

Climate Change Mitigation

As the atmospheric CO₂ is sequestered by trees through the photosynthesis and stored as carbon into woody structures (biomass), estimation of the biomass produced at existing or newly planted tree crops would be a good indicator of the CO₂ sequestered.

Carbon sequestration

Soil is among the main reservoirs of carbon at tree crops. Therefore, it is proposed to use the % of soil organic carbon (SOC) determined through standard soil analysis methodology as indicator for actual and potential sequestration of carbon.

Resource efficiency water - 4.3 Resource efficiency soil

Increasing carbon content of soil improve certain agronomic features of soil including its water holding capacity and in turn the ability of soil to store water. That soil function is pivotal for the socio-economy of rainfed crops and to sustain tree physiological activity which is in favour of CO₂ sequestration. In soil with higher water holding capacity the irrigation requirements could be reduced leading to increase water use efficiency.

Therefore, it is proposed to use the change of soil water holding capacity as indicator of the effectiveness of the increased soil carbon content which is expected under the sustainable practices boosted by CLIMATREE. Information from standard methodology for the determination of soil water retention curve will be combined with information on root zone depth to estimate soil water holding capacity.