



LIFE15 CCM/IT/000123

Progress Report
Covering the project activities from 01/07/2016 to 31/05/2017

Reporting Date
31/05/2017

SheepToShip LIFE
**Looking for an eco-sustainable sheep supply chain:
environmental benefits and implications**

Data Project

Project location:	Sardinia
Project start date:	01/07/2016
Project end date:	30/06/2020 Extension date: -
Total budget:	€ 2.610.043
EU contribution:	€ 1.533.561
(%) of eligible costs:	59,26

Data Beneficiary

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Summary

List of abbreviations	1
1. Executive summary	1
1.1 General progress	1
1.2 Assessment as to whether the project objectives and work plan are still viable .	2
1.3 Identified deviations, problems and corrective actions taken in the period	2
2. Administrative part	3
3. Technical part	3
3.1 Progress per action	3
3.2 Envisaged progress until July 2018	13
3.3 Impact	14
3.4 Outside LIFE	15
4. Financial part	15
4.1 Costs incurred	15

List of abbreviations

SheepToShip LIFE: StS
Life Cycle Assessment: LCA
Life Cycle Inventory: LCI
GHG: Greenhouse Gas
PDO: Protected Designation of Origin
IGP: Protected Geographical Indication

1. Executive summary

1.1 General progress

The StS kick-off meeting was held on late July 2016, three weeks after the start date of the project. However, the project activities were fully implemented later in September. In particular, the first months (until February 2017) were deeply dedicated to addressing the following critical start-up steps: i) definition of internal rules, ii) project staff recruitment, iii) development of management tools, iv) updating of the project time schedule. Therefore, a partnership agreement was signed on January 2017 and the StS management guidelines and tools were defined, testing in a practical way the established partnership coordination system. With the first StS Steering Committee meeting (December 2016) the organizational structure of the project were completed and the operational stage started moving to the heart of the Preparatory Actions. In particular, the following relevant activities were concluded: i) the main part of the characterisation of Sardinian dairy sheep production systems, ii) the first version of the review on the GHG emissions and environmental implications of the sheep sector, iii) the training of field LCA data collection staff, iv) the elaboration of practical LCI data collection guidelines, and v) the report on the GHG emission baseline for the Sardinian sheep sector.. The activities related to LCA studies application (Implementation actions) started focusing on i) the definition of methodological rules through the elaboration of the initial version of the Guidelines for LCA studies in Mediterranean dairy sheep supply chain and ii) the stakeholder mapping, looking for the further socio-economic feasibility study about the eco-innovation process promoted by StS. With regard to networking activities, the ground was prepared for greater interaction between the key stakeholders at local and international level, such as the cooperation agreement achieved with i) the three Sardinian PDO sheep milk cheese Consortia (which represent almost 90% of total Sardinian sheep milk production), ii) the PGI lamb of Sardinia Consortia, and iii) four prestigious international research centres. In the same way, the recently designed logo and visual identity toolkit as well as the definition of the Information and Communication Plan general framework will be used as soon as possible to disseminate the project strategy and contents across all the targeted territories. For instance, an abstract based on the above mentioned GHG baseline report was accepted at a national scientific conference.

In conclusion, despite the slightly delays essentially related to administrative issues, the StS physical and financial progress can be defined satisfactory and quite consistent with the established deliverables and milestones timetable schedule. The main achievements that should be optimistic about the future of StS are both the effective coordination and

solid cooperation among the partners and the positive feedback and interest to collaborate expressed by local stakeholders and international organizations.

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

The contacts with the main stakeholder confirmed the strong interest of the dairy sheep enterprises in the StS initiative. In particular, the above mentioned Sardinian PDO and IGP Consortia remarked that StS is coherent and could improve their innovation strategies, highlighting that the characterization of the environmental profile and the improvement of the environmental performances of Sardinian sheep milk cheese can drive the whole sector towards an effective valorisation of the environmental quality of the Mediterranean sheep products. In other terms, the StS specific objective of integrating climate change mitigation with rural development strategies are considered as a viable solution by the main target group of the project. Moreover, considering the progress of the implementation actions and the encouraging results of the preliminary activities, the StS work plan is still consistent with the project strategy and the reference context.

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

StS incurred in inevitable delays during the Preparatory actions, largely due to administrative and bureaucratic complications. Recent changes in the internal procedures of public bodies and the need of some partners to identify the most appropriate way to manage the budget between internal operational units, extended the time for concluding the recruitment of the additional staff and for completing the purchase of external services and durable goods. However, this compliancy has been successfully overcome and the project reached a sound and promising management/administrative system.

2. Administrative part

The administrative staff of the coordinating beneficiary is composed by: Enrico Vagnoni, Project Manager (additional staff), e.vagnoni@ibimet.cnr.it; Barbara Mustacciu, Administrative officer (permanent staff), b.mustacciu@ibimet.cnr.it; Daniela Murgia, Administrative assistant (permanent staff), d.murgia@ibimet.cnr.it.

Any changes in the project's management structure and in the partnership composition has been done.

For a more detailed description of what has been achieved by the project organisation and co-ordinating activities, see section Technical part, 1.4 Progress per action, F.1 Project Management.

3. Technical part

3.1 Progress per action

A. Preparatory actions

A.1. Operational structure and management tools definition

- Status of the action: in progress.

	Foreseen	Actual
Start date	01/07/2016	01/07/2016
End date	31/12/2016	15/06/2017

- Activities and results

Foreseen	Achieved
<p>The action aims to define and complete the operational structure and management tools (partnership agreement, management guidelines, template for internal monitoring, etc.), including the recruitment and training of the additional staff and the preliminary characterisation of Sardinian dairy sheep production systems.</p> <p><u>Expected results:</u></p> <ul style="list-style-type: none"> - Project staff recruited, set up and trained. - Consolidation of management processes. 	<p>A partnership agreement was signed by all partners. Management tools for internal planning and monitoring were defined and implemented contributing to reach a consolidate management process of the project. The operational structure, including the recruitment of the additional staff, was designed and completed. A training course addressed to personnel for field LCA data collection was done, as well as practical guidelines for standardizing and facilitating the data collection. A preliminary characterisation of Sardinian dairy sheep production systems was delivered, but the final version, with detailed information about the management systems adopted by farms in each production area actually identified, will be completed in July 2017.</p>
<p>Problems/delays: the 6-month extension of the action duration was determined by a delay in acquiring the “Sardinian farm’s dataset” needed to completing the activity ‘A.1.3. Characterisation of Sardinian dairy sheep production systems’. The dataset was acquired at the beginning of April 2017 instead of December 2016, because of the complexity of the relative administrative procedure. This delay slightly impacts on actions C.1÷C.3 time schedule.</p>	

Deliverables	Foreseen	Actual	Comments
A.1.2 Project Management toolkit	30/09/2016	20/09/2016	Delivered.
A.1.3a Report on the characterisation of Sardinian dairy sheep production systems	31/12/2016	04/04/2017	Delivered.
A.1.4 Guidelines for LCI data collection	31/12/2016	22/04/2017	Delivered.

A.2. State of art and preliminary studies

- Status of the action: in progress.

	Foreseen	Actual
Start date	01/07/2016	01/07/2016
End date	31/12/2016	30/06/2017

- Activities and results

Foreseen	Achieved
<p>This action includes a set of preparatory activities aimed to update the scientific and technical state of the art and to build a solid networking platform between stakeholders and target groups of the project.</p> <p>Expected results:</p> <ul style="list-style-type: none"> - Baseline scenario identified. - Stakeholders strongly involved in development actions. 	<p>The strong effort on mapping recent and existing experience and knowledge about the environmental implications and GHG mitigation strategies for the small ruminants sector, lead to: i) define a baseline scenario of GHG emissions by Sardinian dairy sheep supply chain; ii) make a critical review of the main international scientific LCA studies aimed to evaluate the environmental impacts and to identify effective mitigation actions for the dairy sheep sector; iii) outline a LCA methodological framework oriented to build and share a harmonized approach for assessing the environmental implications of Mediterranean dairy sheep supply chains. On the other hand, frequent direct contacts were dedicated to the main professional organizations of the Sardinian dairy supply chain, in order to build a solid networking platform involving, firstly, the key stakeholders at local level. In particular, the four consortia of Sardinian sheep products protected by a European quality mark ('Pecorino Romano' PDO cheese, 'Fiore Sardo' PDO cheese, 'Pecorino Sardo' PDO cheese, 'Agnello Sardo' PGI lamb) demonstrated a strong interest towards the StS initiative, expressing the willingness to establishing a fruitful collaboration. The three Sardinian cheese PDO Consortia transform about 90% of the total Sardinian sheep milk production. The StS Scientific Board was constituted, involving five prestigious organizations, as a form of international scientific and technical cooperation on project promotion and implementation. Moreover, a strong collaboration relationship was enlaced with a farmer association of the Manchega sheep breed (A.G.R.A.M.A.), in Albacete, Spain.</p>
<p>Problems/delays: also in this case, the delay with respect to the roadmap was due to administrative delays for concluding the recruitment of the additional staff and to the general inertia of the administrative machine. This problem was definitely solved and all the activities will be implemented without further delays.</p>	

Deliverables	Foreseen	Actual	Comments
A.2.1 Preliminary report on the GHG emission baseline for the sheep sector in Sardinia	31/12/2016	09/03/2017	Delivered.
A.2.1 Review of the GHG emissions and environmental implications of the sheep sector	31/12/2016	30/05/2017	This Review has to be considered as a first version. The final version will be delivered in July 2017.

C. Implementation actions

C.1. Analysis of the environmental implications of the dairy sheep supply chain

- Status of the action: in progress.

	Foreseen	Actual
Start date	01/10/2016	01/09/2016
End date	31/03/2018	30/06/2018

- Activities and results

Foreseen	Achieved
<p>LCA applications in order to analyse the environmental implications of i) the more relevant sheep milk production systems adopted in Sardinia and ii) the three Sardinian PDO sheep milk cheeses (Pecorino Romano, Pecorino Sardo, Fiore Sardo).</p> <p><u>Expected results:</u></p> <ul style="list-style-type: none"> - Quantification of GHG emissions from Sardinian livestock sector and sheep industry. - Environmental characterization of Sardinian dairy sheep supply chain. 	<p>During the first stages of Action C.1, most of the effort was dedicated to discussing (i) methodology aspects of an LCA site-specific approach and (ii) the more appropriate criteria to be used at farm and plant levels. Therefore, the first version of the ‘Guidelines for LCA application on Mediterranean dairy sheep supply chains’ was elaborated in collaboration with all technical partners of the project. The guidelines describe the specific approach adopted by the project during the LCA field activities and, at the same time, could represent a methodological reference for others users interested in LCA application to small ruminants dairy sector.</p>
<p>Problems/delays: the selection process of case study farms, where conducting the established LCA studies, strongly depends on the above mentioned availability of dataset on Sardinian farms. Therefore, the delay reported in A.1 for acquiring this dataset did not allow the starting of LCA field activity. The time shift of the end date of the action C.1 can be estimated in 2/3 months.</p>	

Deliverables	Foreseen	Actual	Comments
C.1.1 Methodological guidelines for LCA studies in Mediterranean dairy sheep supply chain	28/02/2017	04/04/2017	The Guidelines delivered in this monitoring report may be considered as an initial version that will be revised and updated at the end of the actions C.1, C.2 and C.3.
C.1.2 Technical report on eco-innovation of Sardinian PDO sheep milk cheese	31/03/2018	30/06/2018	Not due in this monitoring report.
C.1.3 Report and critical revision of LCA studies	31/03/2018	30/06/2018	Not due in this monitoring report.

C.4. Environmental action plan for the Sardinian dairy supply chain

- Status of the action: started.

	Foreseen	Actual
Start date	01/01/2019	19/04/2017
End date	30/06/2020	30/06/2020

Considering the crucial role of the socio-economic feasibility study that will highlight the cultural and economic barriers that can weaken or limit the Action Plan, we decided to anticipate the activity 'C.4.2 Socio-economic feasibility study'. This will be done taking into account the contribution of the main stakeholders along the Action Plan development rather than during the final phase of elaboration. In addition, we could fully capitalize in this way the contacts with stakeholders and project target groups involved in the LCA studies and networking activities.

E. Communication and dissemination of results

E.1. Information and communication strategy

- Status of the action: in progress.

	Foreseen	Actual
Start date	01/01/2017	01/01/2017
End date	30/06/2020	30/06/2020

- Activities and results

Foreseen	Achieved
The action aims to develop a clearly defined communication strategy – including context analysis, setting of communication goal and objectives, definition of target audiences, related key messages and monitoring and	During the reporting period the foundation has been laid for delivering a shared strategic plan for project communication. There has been extensive analysis of the background against which the project is being implemented, of the most relevant stakeholders, of the key messages to

<p>evaluation mechanisms – in order to meet core project objectives.</p> <p><u>Expected results:</u></p> <ul style="list-style-type: none"> - Communication strategy in line with the project’s objectives and acknowledged by the Partnership; - Development of a Project visual identity kit manual; - Project website complete and updated. 	<p>convey and the preferable channels to reach the targeted audiences. Continuous exchange of information among partners was crucial to reach a common communication approach. A final version of a structured and scheduled plan for the forthcoming period is being drafted and will be completed by the end of June 2017.</p> <p>The project’s visual identity - including logo and its application across several media, was developed. The procedure for the purchase of the website was concluded and the first version of the site will be on-line in June 2017.</p>
<p>Problems/delays: some delay in staff recruitment, as well as a new administrative procedure to be complied with for public bodies, built up a number of delays, as some deliverables are partly interdependent. Nevertheless, these setbacks were overcome and the activity is now running smoothly.</p>	

Deliverables	Foreseen	Actual	Comments
E.1.1 Information and Communication Plan	28/02/2017	15/06/2017	Slight delay due to administrative procedures.
E.1.2 SheepToShip LIFE website	28/02/2017	15/06/2017	Slight delay due to administrative procedures.
E.1.2 Communication material package	30/04/2017	31/05/2017	Delivered (electronic format). The printed material will be delivered in early June 2017.

E.2. Dissemination of results and networking

E2.1. Information and communication events

- Status of the action: started.

	Foreseen	Actual
Start date	01/07/2017	30/03/2017
End date	30/06/2020	30/06/2020

- Activities and results

Foreseen	Achieved
<p>The action includes a range of technology-transfer dissemination activities aimed at promoting and publicizing project values and best practices among experts and the general public.</p> <p>Expected results:</p> <ul style="list-style-type: none"> - Dissemination of guidelines, methods and tools to relevant stakeholders; 	<p>A press release referring to the project’s kick-off meeting (held in Cagliari, Italy – 28th July 2016) obtained a media coverage of 11 news items, and was launched by the Italian Press Agency (ANSA).</p> <p>The abstract titled ‘Facing carbon emission mitigation of dairy sheep supply chain: estimation of a baseline trend’ (attached to the present monitoring report), was formally</p>

<ul style="list-style-type: none"> - Awareness on methods and tools for reaching the objectives of eco-conscious productions processes; - Implementation of good practices; - National and international media coverage; - Increased public awareness on the project themes. 	<p>accepted by the Organizing Committee of the national ‘Congress of the Animal Science and Production Association - 2017’, which will be held in Perugia (Italy), from the 13th to the 16th of June 2017. A StS information point was present at the 19th Symposium of the European Grassland Federation that took place on 8th – 10th May 2017 in Alghero (Sardinia, Italy).</p> <p>Moreover, a verbal understanding aimed at realizing demonstration actions at European level has been undertaken with the Agricultural University of Athens (Greece), the A.G.R.A.MA. farmer association (Spain) and the CITA - Agro-food research and technological centre of Zaragoza (Spain).</p>
<p>Problems/delays: no problem to note.</p>	

F. Project management

F.1. Project management and coordination

- Status of the action: in progress.

	Foreseen	Actual
Start date	01/07/2016	01/07/2016
End date	30/06/2020	30/06/2020

- Activities and results

Foreseen	Achieved
<p>The action aims to achieve efficient, effective, and flexible project dynamics, through a management system able to meet the timing and quality of the activities needed for the implementation of actions, and driven by the compliance with procedures and the horizontality of the decision flows.</p>	<p>In order to optimize the organization and coordination of the project the ‘StS management guidelines’ was elaborated by CNR Ibimet involving in a participatory work all the beneficiaries. The guidelines defines the organisational structure, the rules and decision-making processes, the methodological criteria and tools for the project management (see deliverables ‘F1_StS LIFE Management guidelines’ and ‘A1_Project Management tools kit’). A ‘Google Drive’ and a ‘Skype’ StS accounts were also created in order to facilitate communication and coordination among beneficiaries. The coordinating beneficiary ensured an effective project coordination, representing a clear reference for all beneficiaries regarding the proper implementation of LIFE administrative procedures. In particular, all project documentation and materials, as well as, all communications with EASME/NEEMO were shared and discussed among the partners. The StS Steering Committee - established in the project kick-off meeting, held in Cagliari on 28/07/2016 – seems to meet effectively the governance standards needed by the project. During the reporting period, the first Steering Committee (Sassari, 13/12/2016) and three Technical Committees (Olmedo-Bonassai,</p>

	12/10/2016; Sassari, 01/12/2016 and 25/05/2017) were held. CNR Ibimet participated also in the Kick-Off meeting of LIFE15 CCM projects in Bruxelles. In conclusion, the management and coordination methods and tools adopted by the project are consistent with EASME/NEEMO rules and allow a smooth and effective communication within the partnership. Therefore, the project fully achieved the goal established for this action.
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Problems/delays: delays for concluding the recruitment of the additional staff occurred. This delay was largely due to: 1) recent changes in the internal procedures (CNR) for personnel recruitment that slowed down the entire process, 2) the late transfer to the partners of the first pre-financing payment. This second reason for the delay was determined by the need of some partners to identify the most appropriate way to manage the budget between internal operational units. The transfer of the first pre-financing payment to all the partners was done on October 2016.

Deliverables	Foreseen	Actual	Comments
F.1.1 Kick-off meeting	31/07/2016	28/07/2016	Done.
F.1.2 SheepToShip LIFE Management Guidelines	31/12/2016	20/09/2016	Done.
F.1.3 First progress report	15/01/2017	30/04/2017	Postponed and integrated with the I annual progress report, as agreed with NEEMO/EASME.
F.1.3 I annual progress report	31/07/2017	30/04/2017	See above.
F.1.3 Mid-term report	31/07/2018	31/07/2018	Not due.
F.1.3 Mid-term audit report	31/07/2018	31/07/2018	Not due.
F.1.3 III annual progress report	31/07/2019	31/07/2019	Not due.
F.1.3 Final report	30/09/2020	30/09/2020	Not due.
F.1.3 Final audit report	30/09/2020	30/09/2020	Not due.

The progress made and the planned actions of the project are illustrated in the following figure 1 (page 12-13) and table 1 (page 14-15).

Figure 1. StS Gantt-chart: for each action/sub-action/activity are reported start date, end date and deliverables foreseen and actual.

Year			2016												2017											
Action / Sub-Action / Activity / Month (deliverable)			J	A	S	O	N	D	J	F	M	A	M	J	L	A	S	O	N	D						
A1	Defining the organizational structure and management and operational tools	A1.1 Operational staff definition	proposed																							
		actual																								
		A1.2 Management tools definition	proposed			2																				
		actual			2																					
		A1.3 Characterization of production systems	proposed					6																		
actual											6a		6b													
A2	State-of-the-art update	A.1.4 - Training of LCA data collection staff	proposed					4																		
		actual									4															
		A.2.1 Scientific and technical state of the art update	proposed					5-7																		
actual									5		7															
A2	State-of-the-art update	A.2.2 Contacts with stakeholder and project beneficiaries	proposed																							
		actual																								
		A.2.3 Agreements and memorandum of understandings	proposed																							
actual																										
C1	Analysis of the environmental implications of the sheep milk supply chain	C.1.1 Sheep milk LCA studies	proposed							9																
		actual									9															
		C.1.2 LCA studies on Sardinian PDO cheeses	proposed																							
actual																										
C1	Analysis of the environmental implications of the sheep milk supply chain	C.1.3 LCA studies systematization	proposed																							
		actual																								
C2	Eco-innovation	proposed																								
		actual																								
C3	Livestock and dairy farm models	proposed																								
		actual																								
C4	Environmental Action Plan	C.4.1 Participatory programming and mitigation strategies proposition	proposed																							
		actual																								
		C.4.2 Socio-economic feasibility study	proposed																							
		actual																								
C4	Environmental Action Plan	C.4.3 Implementation	proposed																							
		actual																								
D1	Environmental impact monitoring	proposed																								
		actual																								
D2	Socio-economic monitoring	proposed																								
		actual																								
E1	Information and communication strategy	E.1.1 Information and Communication Plan	proposed							10																
		actual												10												
		E.1.2 Communication and dissemination activities	proposed								11		12		13											
actual												12	11													
E2	Dissemination of results and networking	E.2.1 Information and communication events	proposed																							
		actual																								
		E.2.2 Networking	proposed																							
		actual																								
		E.2.3 Publications	proposed																							
actual																										
E2	Dissemination of results and networking	E.2.4 Demonstration and dissemination activities in Europe	proposed																							
		actual																								
		F.1.1 Coordination	proposed																							
F1	Project Management - Coordination	actual																								
		F.1.2 Management	proposed					3																		
		actual																								
		F.1.3 Monitoring	proposed							8																
actual											8-14		14													
F2	After SheepToShip Plan	proposed																								
		actual																								

Year			2018												2019												2020											
Action / Sub-Action / Activity / Month (deliverable)			J	F	M	A	M	J	L	A	S	O	N	D	J	F	M	A	M	J	L	A	S	O	N	D	J	F	M	A	M	J	SEPT					
C1	Analysis of the environmental implications of the sheep milk supply chain	C.1.1 Sheep milk LCA studies	proposed																																			
		actual																																				
		C.1.2 LCA studies on Sardinian PDO cheeses	proposed				15																															
C2	Eco-innovation	proposed																																				
		actual													22-23																							
C3	Livestock and dairy farm models	proposed																																				
		actual																																				
C4	Environmental Action Plan	C.4.1 Participatory programming and mitigation strategies proposition	proposed																																			
		actual																																				
		C.4.2 Socio-economic feasibility study	proposed																																			
		actual																																				
D1	Environmental impact monitoring	proposed																																				
		actual					16																															
D2	Socio-economic monitoring	proposed																																				
		actual																																				
E1	Information and communication strategy	E.1.1 Information and Communication Plan	proposed																																			
		actual																																				
E2	Dissemination of results and networking	E.2.1 Information and communication events	proposed																																			
		actual																																				
F1	Project Management - Coordination	F.1.1 Coordination	proposed																																			
		actual																																				
		F.1.2 Management	proposed																																			
		actual																																				
F2	After SheepToShip Plan	proposed																																				
		actual																																				

Deliverables list

n.	Name	n.	Name	n.	Name	n.	Name
1	Kick-off meeting	11	SheepToShip LIFE web site	21	Mid-term conference report	31	Report on demonstration events in European Countries
2	Project Management tools kit	12	Communication material package	22	Best practice manual for sheep sector climate change mitigation	32	Report on demonstration events in Spain, Romania, Greece and France
3	SheepToShip LIFE management guidelines	13	Promotional video	23	Best practice manual for sheep milk cheese industry climate change mitigation	33	Final conference report
4	Guidelines for LCI data collection	14	1 annual progress report	24	Report on meetings with EU institutions and bodies	34	Report on regional technical/political meetings
5	Preliminary report of the GHG emissions baseline for the sheep sector in Sardinia	15	Technical report on eco-innovation of Sardinian PDO sheep milk cheese	25	III annual progress report	35	Technical and scientific publications
6	Report of the characterisation of Sardinian dairy sheep production systems (6a= preliminary version; 6b= final version)	16	Mid-term monitoring report	26	Report on information and communication meetings at national level	36	Layman's Report
7	Review of the GHG emissions and environmental implications of the sheep sector	17	Report and critical revision of LCA studies	27	Final report of the socio-economic feasibility study	37	Report of the project socio-economic impact
8	First progress report	18	Action Plan for the improvement of the environmental performance of case study enterprises	28	Environmental action plan for the Sardinian dairy supply chain	38	After-LIFE SheepToShip plan
9	Methodological guidelines for LCA studies in Mediterranean dairy sheep supply chain	19	Mid-term report	29	Final monitoring report	39	Final report
10	Information and Communication Plan	20	Mid-term audit report	30	Report of the follow-up of the implementation of the farms/industries action plans	40	Final external audit report

Table 1. Milestones timetable organized in ascending chronological order respect to the actual deadline.

Action	Milestones	Foreseen	Actual	Comments
F1	Participatory elaboration of management tools	15/12/2016	15/09/2016	Delivered.
F1	Systematization of physical and financial progress of the first year of the project	15/07/2017	15/09/2016	Anticipated as agreed with NEEMO/EASME.
A1	Management Guidelines adoption	31/10/2016	31/10/2016	Elaborated on October 2016 and approved by the Steering Committee on December 2016.
A1	Training of LCA data collection staff completed	31/12/2016	21/04/2017	The training course was held in Siamaggiore (OR) on 20-21 April 2017.
E1	SheepToShip LIFE logo and visual identity	31/12/2016	26/04/2017	Delivered.
A1	Additional staff recruited and operational structure set up	31/12/2016	30/04/2017	The recruitment of the additional staff was completed according to the actual status of the project.
A2	Specific agreements with private and public associations	31/12/2016	30/06/2017	Currently, we have a gentlemen's agreement with i) the four consortia of Sardinian PDO sheep products, and ii) with five international research centres (Scientific Board). Both cooperation agreements will be signed before the end of June 2017, during a StS public event. Thereafter, according to the strategy defined in the Information and Communication Plan, further agreements will be sealed with farmer organizations, technical and research centres and NGO, both at local and international level.
E2	Agreements with European stakeholders involved in demonstration actions	31/03/2017	30/09/2017	An informal agreement has been undertaken with the Agricultural University of Athens (Greece), the A.G.RA.MA. farmer association (Spain) and the CITA, Agro-food research and technological centre of Zaragoza (Spain).
C1	Quantification of environmental implications of the sheep milk life cycle according to different production systems	30/11/2017	28/02/2018	Not due in this monitoring report.
C3	Agreement with case study farms/industries for an eco-innovation action plan implementation	30/04/2018	30/04/2018	Not due in this monitoring report.
E1	First contacts and meetings with key technical and political actors at local, national and European level	30/06/2018	30/06/2018	Not due in this monitoring report.
F1	Systematization of physical and financial progress of the second year of the project	15/07/2018	15/07/2018	Not due in this monitoring report.
C1	Quantification of the environmental implications of the life cycle of the three Sardinian PDO sheep milk cheese	31/07/2018	31/07/2018	Not due in this monitoring report.
C3	Definition of the optimal production system from an environmental and economic point of view	30/09/2018	30/09/2018	Not due in this monitoring report.
C3	Introduction of low techniques input	31/12/2018	31/12/2018	Not due in this monitoring report.
E2	Agreements with national and international organisations	31/01/2019	31/01/2019	Not due in this monitoring report.
C2	Consultation with sector operators	31/10/2018	28/02/2019	Not due in this monitoring report.
C4	Definition of socio-economic implications related to the implementation of the Environmental Action Plan	30/04/2019	30/04/2019	Not due in this monitoring report.
F1	Systematization of physical and financial progress of the third year of the project	15/07/2019	15/07/2019	Not due in this monitoring report.
C4	Stakeholders consultation on the general lines of the Environmental Action Plan	31/07/2019	31/07/2019	Not due in this monitoring report.

Action	Milestones	Foreseen	Actual	Comments
D1	Standardization and characterization of the environmental performances of reference model farms/plants	30/11/2019	30/11/2019	Not due in this monitoring report.
D2	Identification and interview of the key actors/players.	31/03/2020	31/03/2020	Not due in this monitoring report.
E2	Participation in international events	31/03/2020	31/03/2020	Not due in this monitoring report.
F2	Identification of new projects related to SheepToShip LIFE strategy	31/03/2020	31/03/2020	Not due in this monitoring report.
F2	Mapping of the main funding instruments at national and international level, and definition of a fundraising strategy to ensure the continuity of the project	31/03/2020	31/03/2020	Not due in this monitoring report.
F1	Systematization of the final physical and financial progress of the project	15/09/2020	15/09/2020	Not due in this monitoring report.

3.2 Envisaged progress until July 2018

From May to June 2017 the Preparatory Actions (Action A.) will be concluded, completing the deliverable ‘A.1.3 Report of the characterisation of Sardinian dairy sheep production systems’ and formalizing the agreements with the StS key stakeholders. The case studies for LCA applications will be selected before September, according to the results of the activity ‘A.1.3 Characterization of production systems’. Therefore, the LCA activities (‘C.1.1 Sheep milk LCA studies’ and ‘C.1.2 LCA studies on Sardinian PDO cheeses’) may start in early October 2017 and could be concluded for the end of June 2018. Similarly, the demonstrative implementation of eco-innovative technical solutions in sheep dairy farms models (‘C. 3 Livestock and dairy farm models’) may start in April 2018, carrying out the first deliverable (‘C.3 Action Plan for the improvement of the environmental performance of case study enterprises’) in September 2018. On the other hand, the mid-term report of the StS environmental impact monitoring (Action D.1) will be elaborated and delivered in July 2018. In force to the first relevant results of the project, during the period May 2017 to July 2018 key activities of Action ‘E. Communication and dissemination of results’ will be implemented. In particular, between the end of May and mid June 2017 the ‘StS Information and Communication Plan’ and the main related communication tools - i.e. StS identity design and website, leaflets, etc. – will be realized and then utilized following the established networking and information/dissemination strategy. As a consequence, the foreseen agreements with European (Spanish, Greeks, French, Romanian) stakeholders involved in demonstration actions may be signed in September 2017, as well as several publications and promotional/media events will be done between the considered period. The first steps will be the organisation of: i) a press conference, at the signature of the cooperation agreements with the Sardinian PDO Consortia, and ii) a scientific conference focused on StS themes and aimed at promoting the project, that will be held in Rome, October 2017. Regarding the ‘F.1 Project Management-Coordination’ action, in early July 2017 and in December 2017/January 2018 two meetings of the StS Steering Committee are foreseen, according to the time schedule defined in the StS Management guidelines for the internal monitoring/planning of the project.

3.3 Impact

StS is still in the early implementation stages. Therefore, the impact of project activities both on the climate change mitigation and socio-economical issues is not yet tangible, since the key actions must still go into the heart of the matter. However, the interest expressed by the main stakeholders seem promising for achieving good results.

In order to monitoring the StS progress, we identified the following project impact parameters and indicators:

Climate Action

Impact	Indicator/Parameter	Achievements
Direct / quantitative environmental benefits	GHG emissions from small ruminant sector: -2.000 t kg CO ₂ /year; -5.000 t kg CO _{2eq} /year (N ₂ O and CH ₄).	See introduction.
Relevance for environmentally significant issues and policy areas	Implementation at territorial scale of :i) agricultural and livestock low input practices and ii) monitoring/certification system of GHG emission.	See introduction.
Long-term / qualitative environmental benefits	Maximization of the positive environmental role of low input systems (C sequestration and mitigation of environmental risks).	See introduction.

Environmental Governance & Information

Impact	Indicator/Parameter	Achievements
Long-term / qualitative socio-economic benefits –long term financial sustainability.	<ul style="list-style-type: none"> ▪ Increasing of competitiveness and profitability of high nature value sheep farming systems. ▪ Valorisation of the ecosystem services of grassland-based sheep farms. 	See introduction.
Continuation of the project actions by beneficiaries and by other stakeholders	<ul style="list-style-type: none"> ▪ Implementation of the Environmental Action Plan for the dairy sheep sector by the Sardinian Government. ▪ Training of 200 operators for farm technical support in eco-innovation. 	See introduction.
Replicability	Adoption of the SheepToShip LIFE strategy in others regions/countries where sheep sector is relevant, i.e. Sicily, Tuscany and Lazio in Italy, Romania, Greece, Spain and France.	See introduction.
Demonstration value and transferability	200,000 new informed people about the benefits related to the eco-innovation of sheep sector.	See introduction.

3.4 Outside LIFE

During this progress report period four main actions took place outside the framework of StS:

- in cooperation with University of Sassari and other groups, the leading beneficiary, CNR Ibimet, submitted a project proposal to the Regional Administration of Sardinia about climate change mitigation actions in the viticulture sector, proposing an approach similar to that of StS;
- in cooperation with Italian and French local Administrations, the leading beneficiary, CNR Ibimet, submitted a project proposal to the Interreg Cooperation Program IT-FR Maritime about the valorisation of local agri-food markets, where climate change mitigation activities were included;
- CNR Ibimet participated in a local “learning and working” project for secondary schools, promoting the climate change mitigation issue and discussing the implications of agricultural activities;
- CNR Ibimet will participate in the event “The Isle of Sustainability”, December 2017, in Rome, dedicated to some of the *Sustainable Development Goals - Agenda 2030*, contributing to the discussion about sustainable production and consumption.

4. Financial part

4.1 Costs incurred

The incurred Personnel costs reported in the following table refer to the period from 01/07/2016 to 31/03/2017.

Budget breakdown categories	Budgeted costs in €	Costs incurred from the start date to 31/05/2017 in €	% of Budget
1. Personnel	1.884.822	150.522	8%
2. Travel and subsistence	123.300	1.977	2%
3. External assistance	216.260	15.137	7%
4. Durable goods	44.100	24.812	56%
Infrastructure	0	0	-
Equipment	44.100	24.812	56%
Prototype	0	0	-
5. Land purchase / long-term lease	0	0	-
6. Consumables	126.815	0	0.0%
7. Other Costs	46.296	287	1%
8. Overheads	168.450	13.298	8%
TOTAL	2.610.043	206.211	8%

Action number and name	Budgeted costs	Budgeted hours	% of Budget spent	% of hours spent
A.1 Defining the organizational structure and management and operational tools	25.170	710	122%	116%
A.2 State-of-the-art update	28.311	762	137%	133%
C.1 Analysis of the environmental implications of the sheep milk supply chain	353.492	10.605	16%	11%
C.2 Eco-innovation and improvement of the production techniques	252.538	9.446	0%	0%
C.3 Livestock and dairy farm models	334.268	9.807	4%	0%
C.4 Environnemental action plan	258.966	8.890	0%	0%
D.1 Environmental impact monitoring	160.846	7.070	0%	0%
D.2 Socio-economic monitoring	129.768	4.650	0%	0%
E.1 Information and communication strategy	338.496	9.614	9%	8%
E.2 Dissemination of results and networking	322.452	8.495	0.4%	0%
F.1 Project Management - Coordination	313.036	3.912	15%	16%
F.2 After SheepToShip Plan	92.700	3.204	0%	0%
TOTAL	2.610.043	77.167	8%	6%

For the Preliminary actions (A.1 and A.2) costs exceeded on average by 29% the foreseen budget. This is because these activities lasted about six months longer than expected.

The 100 % of first pre-financing payment is expected to be absorbed by the end of the mid-term report's deadline (July 2018).