



LIFE PROJECT - SEKRET LIFE12 ENV/IT/442

"Sediment ElectroKinetic REmediation Technology for heavy metal pollution removal"

DELIVERABLE ACTION E.2 REPORT ON MONITORING INDICATORS



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1. INTRODUCTION

The aim of this “Report on monitoring indicators” related to Action E.2 is to provide specific monitoring indicators of project activities and establish several rules and procedures to be followed in carrying on the project technical activities.

A specific table and procedures for monitoring all the real progress activities compared to the activities foreseen in the proposal are defined.

2. PROJECT PROGRESS INDICATORS

In order to carry out an effective monitoring of all the activities inside each project action and to guarantee the reaching of the project objectives and the respect of the project timing, UNIPI, as Coordinating beneficiary, receives at the end of each project month a summary of the activities carried out by each beneficiary.

UNIPI has prepared the following table where all the indicators of progress for each project Action have been defined. UNIPI at the end of each month, on the basis of the information collected by each beneficiary, is able to compare the real progress of the project activities compared to the activities foreseen in the project. At each project progress meeting UNIPI shows the table with the progress update to all the beneficiary in order to discuss about the real progress of the project.

The following table compares the real progress of the project activities at 30/09/2014 compared to the activities foreseen in the project.

Action number and name	Action timing	Indicators of progress defined in the project	Indicators of progress at 30/09/2014	Action monitoring
Action A.1 Preliminary assessment of working environment	January 2014- September 2014	10 % - Sub-action A1.1: Number of reports and drawings for preliminary design and permission application (target: 1 reports and 2 drawings) 25 % - Sub-action A1.2: number of collected samples (target: 3 samples); number of complete characterizations (target: 3 characterizations); 100 % - Subactions A1.3: number of reports with results of preliminary assessment (target: 1 report);	Action completed in time with preliminary assessment defined, permission obtained and laboratory tests accomplished	Action ended with objectives completely reached in time. More tests than original planning were performed, with some implications to action B.1
Action B.1 Design of demonstration plant	January 2014- June 2014	10 % - Information and analytical basis collection 25 % - Definition of the needed electrical energy	All indicators were fulfilled on time.	Objectives completely reached with a controlled slight delay of 2.5

		<p>supply; 50 % - Selection of the electrodes and ion-permeable electrolyte casings; 75 % - Selection of the electrolyte management system and electrolyte purification plant 100 % - Definition of the system control/monitoring and Complete Design of EKR demonstration plant - Number of reports and drawings for detailed design of plant and plant components (target: 3 reports and 5 drawings)</p>		<p>months due to the need of more tests than expected within Action A.1.</p>
<p>Action B.2 Construction and validation of demonstration plant components</p>	<p>April 2014- December 2014</p>	<p>40% construction of new components 70% assemblage of components 100% validation and testing of assembled components</p>	<p>Not fulfilled Not fulfilled Not fulfilled</p>	<p>Action with a controlled delay of five months with implications only to Action B.3. The timetable was updated with a delay in the construction of one section of the plant in order to allow some laboratory tests with the sediments dredged within action B.4</p>
<p>Action B.3 Construction and validation of the demonstrative plant</p>	<p>July 2014- December 2014</p>	<p>10 % - Preparation of the area 40 % - Building of the basin with prefab reinforced concrete walls 60 % - Building of the temporary storage tank 65 % - Setup of the sealing liner 80 % - Power and</p>	<p>Not fulfilled Not fulfilled Not fulfilled Not fulfilled Partially fulfilled</p>	<p>Action with a controlled delay of five months due to implication of the delay in Action B.2. The timetable was updated in order to prevent implications to Action B.4</p>

		waterworks connection 90 % - Demonstrative plant assembly 100 % - Demonstrative plant validation	Not fulfilled Not fulfilled	
Action B.4 Demonstration of the SEKRET technology	January 2015- June 2016	20 % - Dredging of 150 m3 of port sediments and positioning in a temporary storage tank; 30 % - Leaching out of salt ions present in the material; 40 % - Sediments preconditioning by sediment washing and particle-size selection, and characterization; 50 % - Laying of the polluted fine fraction in the treatment basin; 60 % - Electro- remediation operation and monitoring activity; 90 % - Complete decontamination of dredged polluted port sediments; 100 % - Disposal in the long-shore CDF and following beneficial re- use.	Not started	Not started: this Action is expected to start on time on January 2015.
Action B.5 Development of policy-oriented recommendations	July 2015- December 2016	Midtime report, due at month 27: 50% of accomplishment of the activity. Final results included in a final report due at the end of the activity: 100% of accomplishment of the activity.	Not started	Not started
Action C.1. Monitoring and characterisation of treated sediments	July 2016- December 2016	20 % - Sampling campaign of the solid and aqueous phase; 80 % - Chemico- physical analyses implementation; 90 % - Treated sediments characterization;	Not started	Not started

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		100 % - Disposal of the sediments in the confined disposal facility or re-use for one of the several beneficial purposes		
Action C.2. Validation of the demonstrated technology with 6 more types of polluted port sediments	October 2014-December 2016	Each sample will require four months for the complete process, after a preparation of three months. - number of electrokinetic tests completed with final report (target: 6 tests)	Not started	Not started
Action C.3. Assessment of technical and economic part – technical guidelines for the use of SEKRET technology	July 2015-December 2016	30% - Collection of information from previous actions 60% - Collection of information from external sources 100% - Complete report	Not started	Not started
Action D.1. Project website	January 2014-December 2016	50% Creation of website 70% Website optimization and positioning 80% Creation of the Facebook profile. Reciprocal linking with website. 100% Web site and Facebook profile fully developed	Website created Website update Facebook profile created	Action activities in line with the project
Action D.2. LIFE+ information boards	January 2014-March 2014	60% Board design and layout 80% Board text translated 100% Board printed and installed	Action completed with 13 notice boards produced and installed in each beneficiary premises	Action ended with objectives completely reached in time
Action D.3. Layman's report	July 2016-December 2016	40% Drawing up of the Layman's report text 60% Graphic design and layout 100% Final production and distribution	Not started	Not started
Action D.4. Press and media releases	July 2015-December 2016	40% Drawing up technical articles and press releases 60% Updates	Not started	Not started

		100% Articles and Press Releases published		
Action D.5. Networking	January 2014-December 2016	40% Identification and contacting of relevant organisations/consortia 100% Sharing of experience, data and ideas	Clusters with 10 projects	Action activities more than what foreseen in the project
Action D.6. SEKRET sediment treatment manual and technical guidelines for the use of SEKRET technology	April 2016-December 2016	40% Manual draft 75% Final version of the Manual 100% Manual printed	Not started	Not started
Action D.7. Demonstration workshop, seminars, conferences and other events	January 2016-December 2016	33% Organisation of 2 Informative Workshops 66% Organisation of 2 more Informative Workshops 100% Participation in third-party workshops, conferences and other events	Not started	Not started
Action D.8. Dissemination to Institutions and policy makers	January 2014-December 2016	50% Contact lists drafted (confidential) 100% Policy makers contacted	Start of 4 contacts of Institutions and policy makers	Action activities in line with the project
Action D.9. International fairs and other events	January 2014-December 2016	50% Participation in 2 international fairs. 100% Participation in 4 international fairs	Participation at 11 fairs and international events	Action activities more than what foreseen in the project
Action D.10. Digital supports for international diffusion	January 2014-December 2016	30% Video shot 50% Video edited and post-produced 70% Multilingual and multimedia content added 80% 1000 DVD copies printed 100% Distribution of DVD initiated	Start of contacts of Institutions and policy makers	Action activities in line with the project
Action D.11. After-LIFE Communication Plan	July 2016-December 2016	50% "After-LIFE Communication Plan" drafted 100% "After-LIFE Communication Plan" complete	Not started	Not started

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Action E.1. Project management	January 2014- December 2016	1st Progress report 20% Mid-term Report 40% 2nd Progress report 60% 3rd Progress report 80% Final Report 100%	Inception Report completed and sent	Action activities in line with the project
Action E.2. Monitoring	January 2014- December 2016	20% Indicators established 50% Action monitoring 80% Dissemination monitoring 100% Final monitoring report	Indicators established completed Action monitoring in progress Dissemination monitoring in progress	Action activities in line with the project
Action E.3. Audit	October 2016- December 2016	50% Audit document commissioned 100% Audit document complete	Not started	Not started

The analysis of the above table shows that the project progress exhibits a slight delay in Actions B.2 and B.3. The delay is due to the need of more tests than expected within Action A.1 which caused a slight delay of 2.5 months in the end of Action B.1 and, in turn, to Actions B.2 and B.3. The results of the testing activity suggested also to split the construction of the plant (B.3) in three parts. The first part (construction of the basin) is expected to be accomplished with a delay of 2 months, so as to allow the start of Action B.4 (sediment dredging) on time. The second part of the plant will start with a delay of 3.5 months with no implications on Action B.3. The third part of the plant will start with a delay of 5 months with no implications on Action B.3. The 5 month delay of the third part of plant construction will allow us to perform some laboratory tests on the sediments dredged at the beginning of Action B.1 before assembling some components of the plant, so as to fine-tune the plant to the exact features of the sediments to treat. This revision of the timetable allowed us to avoid implications of the delays of actions B.1, B.2 and B.3 to action B.4 which is the main demonstration activity to be performed using the prototype plant.