




LIFE18 ENV/GR/000019

Brine-Mining

End of Action Report

**Action A.1: Technical planning (tender documents,
permits, Circular Economy Plan)**

Life **BRINE**  **MINING**

END OF ACTION REPORT – ACTION A.1
1. GENERAL INFORMATION
1.1. ACTION DESCRIPTION

Action title: "Technical Planning (tender documents, permits, Circular Economy Plan)"
 Duration: 6 months (Start Date: 1/9/2019 and End Date: 29/2/2020).

The responsible beneficiary for the implementation of this Action was NTUA.

The overall target of Action A.1 was the preparation of all the necessary documents for the implementation of the project's core actions (mainly Action B.1, B.2, B.3) and the advanced elaboration on the Circular Economy Strategy for the coal mine sector in Poland, which was drafted during the proposal stage.

This Action consisted of two Sub-Actions:

- Sub-Action A.1.1: Preparation of tender and permit documents. NTUA was in charge for this Sub-Action in cooperation with THERMOSSOL, LENNTECH, TITANSALT, SUT and SEALEAU.
- Sub-Action A.1.2: Setting the Circular Economy Plan for the coal mine sector in Poland. SEALEAU was responsible for this Sub-Action in cooperation with GIG, NTUA, SUT and PGG.

The expected results were:

- The collection of tender documents for the construction works in the site of project implementation.
- Assembling of proper documentation for the procurement of spare parts and for the construction of the prototype system by each responsible partner.
- The performance of a comprehensive stakeholder and market analysis.
- Presentation of a preliminary Circular Economy Plan for the coal mine sector in Poland.

FINANCIAL DATA

The total budget of the action is **97,720 €**


Personnel: 89,020 € (all beneficiaries)

Travel and subsistence: 8,700 €

END OF ACTION REPORT – ACTION A.1
2. ACTION ASSESSMENT AND EVALUATION
2.1. DELIVERABLES AND MILESTONES

In the following table, the deliverables and milestones of Action A.1 are presented along with the deadlines and their current status.


A/A	Deliverables	Deadline	Status
A.1	Tender and permit documents	31/01/2020	The deliverable was prepared on time. However, the building permit approval for the implementation of the construction works in the site was attached in the deliverable in May, 2021.
A.2	Preliminary Circular Economy Plan for the coal mine sector in Poland	31/03/2020	The deliverable was prepared on time. However, the deliverable was amended based on the comments from the 1 st monitoring visit in May 2020 and it was resubmitted.
A/A	Milestones	Deadline	Status
1.	Circular Economy Strategy (result of the kick-off meeting)	09/2019	The Circular Economy Strategy was discussed among the partners during the kick-off meeting. The results were discussed in the 1 st Stakeholder Event. The event attracted the interest of all the coal mining companies in Poland, as well as ministries and regional policy-making stakeholders. In total, more than 60 people participated in the event representing 100% of the coal mining industry in Poland.
2.	Site visit to Dębieńsko	12/2019	Due to Covid-19 situation, the site visit to Dębieńsko was conducted in 28/09/2021, since travelling was restricted in 2020.

	BRINE-MINING – LIFE ENV/GR/000019	Page: 3/5
END OF ACTION REPORT – ACTION A.1		

2. ACTION ASSESSMENT AND EVALUATION	
2.2 OUTCOME INDICATORS (EXPECTED RESULTS)	
<p>The outcome indicators of the Action, as described in the project proposal, are the following:</p>	
Outcome Indicators	Achievement – Final Result
<p>1. Preparation of all the necessary documents (tender documents and permits) required for the core implementation actions.</p>	<ul style="list-style-type: none"> - Tender documentation: In the project’s proposal, it is mentioned that if the total cost of the pilot system exceeds the threshold price of € 135,000, the associate beneficiaries responsible for the prototype system construction will proceed towards a Published Open Public Tender procedure. However, the associated beneficiaries - technology providers purchased separate parts of their prototype units by different suppliers and none of the spare parts exceeded the cost of € 135,000. Thus, a published Open Public Tender procedure was not necessary to be followed by the technology providers. The overall procedure followed by each technology provider, regarding the procurement of spare parts and services for each equipment construction, is presented in the deliverable A.1. - Permit documentation: NTUA, in collaboration with PGG, ensured the fulfillment of all the necessary tasks for the acquirement of a building permit approval from the local government of the Bieruń-Lędziny County, the county in which the pilot system will operate, in Silesian Voivodeship. The acceptance of the building permit application is attached in the deliverable A.1. Since the Brine-Mining pilot location at Ziemowit mine is covered by the current "mine operation plan", another building permit application was submitted in Poland’s State Mining Authority. The acceptance of the application was received in September, 2021 and it will be valid for six (6) months. After the end of this period, the building permit application will be re-submitted in the Authority.

END OF ACTION REPORT – ACTION A.1
2.2 OUTCOME INDICATORS (EXPECTED RESULTS)

Outcome Indicators	Achievement – Final Result
<p>2. Elaboration on the Circular Economy Strategy for the coal mining sector in Poland, which was drafted during the proposal preparation stage.</p>	<ul style="list-style-type: none"> - A comprehensive stakeholder and market analysis were performed in deliverable A.2. All the relevant stakeholders were identified and divided into the following target audiences: a) Investor Community; b) Coal Mine Industry; c) Other end-users/process industry; d) End-users of materials recovered; e) Policymakers and f) Waste management sector. - Policy aspects: The River Basin Management Plans under the Water Framework Directive for Poland were presented in deliverable A.2 in terms of the pressures from mining activities. It was made clear that there is an increasing need for the management of saline water from mining activities. To this end, the case study of the circular economy approach of the Dębnieńsko plant in Poland was thoroughly presented and assessed in order for the LIFE BRINE-MINING project to gain valuable insights. All the key information regarding the Dębnieńsko plant were presented. A technical analysis was performed regarding the mass and energy balances along with the applied processes and technologies. Finally, the economics of the plant were presented in the deliverable. - Business model: One of the main conclusions of this deliverable was that it is of essential importance to make the action plan being developed relevant to all the stakeholders and to establish an open dialogue with them. In this way, the transition of the coal mine sector will be driven into a sustainable pathway stimulating circular economy activities. Furthermore, the main funding tools from the European Commission were presented and examined to seek opportunities for the establishment of collaboration for the full-scale implementation of the project. These tools could make a major contribution in laying the foundation towards energy transition and carbon neutrality, especially the Just Transition Fund and the Structural and Cohesion funds.

	BRINE-MINING – LIFE ENV/GR/000019	Page: 5/5
END OF ACTION REPORT – ACTION A.1		

3. RISKS, PROBLEMS ENCOUNTERED AND SOLUTIONS FOLLOWED

The withdrawal of TAURON from the project and their replacement by another coal mine owner, PGG, resulted, among others, in the change of the area in which the innovative pilot system will be installed. A building permit was required for the new site. On March 2020, the 1st building permit application was submitted in the local authorities. The application was rejected and the local government requested some changes in the plant's layout. After incorporating these changes, the project consortium re-submitted the building permit application in April, 2020. The application was accepted in May, 2020. The building permit acceptance is attached in the deliverable A.1: *Tender and permit documents*.

The visit to Dębnieńsko was planned in December, 2019. However, due to the Covid-19 situation, travelling was quite limited within the years 2020 – 2021. Eventually, the visit was carried out in September, 2021.

For Sub-Action A.1.2, it is mentioned in the grant agreement that *“All the collected feedback from the kick-off meeting, the site visit in Dębnieńsko and the 1st stakeholder consultation event will be integrated in the form of a report (Deliverable A.2) by SEALEAU. This report will provide critical input for the implementation of Action B.5”*. Due to the COVID-19 crisis, the site visit in Dębnieńsko along with the 1st stakeholder event were postponed till September 2021. As result, it was not possible to integrate all the potential feedback in deliverable A.2. However, valuable information regarding the Dębnieńsko plant was obtained by having online meetings with SUT and GIG. All the material and information that were collected from the 1st stakeholder consultation event and the visit to Dębnieńsko in September 2021 will be used to develop an Action Plan (Action B.5) that will enable to put the LIFE BRINE-MINING innovative scheme into practice.

4. OVERALL ACTION EVALUATION

The Action has been successfully implemented in respect to the planning activities. All the Action objectives were completed, since the deliverables A.1: Tender and permit documents and A.2: Preliminary Circular Economy Plan for the coal mine sector have been successfully prepared, while the milestones "Circular Economy Strategy" and "Site visit to Dębnieńsko" were thrivingly executed, even though there was a delay in the "Site visit to Dębnieńsko", due to the Covid-19 situation.



SEALEAU

GiG Research Institute



LENNTECH
Water Treatment Solutions

TITAN SALT

