Deliverable C1-4

Pilot plant economic and social impact assessment

The aim of an impact assessment analysis is to estimate the positive or negative effects of an “intervention” or change. Many state-of-the-art methodologies are available in literature which have been used as a basis for the methodology to be followed in the LIFE DIANA project.

The methodology that was developed throughout the project’s implementation includes an initial analysis of the objectives, the parameters and the scope of the impact assessment analysis (scoping). As a next step, it is important to determine the problem, which is the petroleum refinery sludge treatment and its further management and present the available technologies in market that deal with our problem (baseline scenario). This step also includes the mapping of the existing legislative framework. The next step is to identify, predict and evaluate the impacts of the project’s development and operation (Predicting/Defining impacts). This shall be done both in a qualitative and quantitative approach mainly by gathering information from the project and the surrounding areas, joining focus group discussions in the pilot’s localities and collecting data from the pilots through the existing monitoring plan. It is important to identify mitigation measures in case of negative impacts which are regularly revised according to the project’s implementation and monitoring plan (identifying mitigation). Finally, evaluation of impacts significance and application of mitigation measures shall be taken into account to ensure a successful and effective project’s progress.

The whole assessment analysis showed that the proposed LIFE DIANA technology is an environmentally friendly technology dealing with the valorization of the petroleum refinery sludge and the production of the valuable material, the so-called engineered soil, which can be safely used in other industrial activities. However, it is important to highlight that this innovative technology requires a very high investment and operational cost which renders it less competitive compared to other sludge treatment technologies that are out in the market.