



THE DEVELOPMENT OF TECHNOLOGY FOR REMOVING DEBRIS, SUSPENDED MATERIAL AND SEDIMENT FROM WATER, BEFORE STORAGE DAM

ID 108

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ABSTRACT

The Ministry of the Economy, Directorate for Entrepreneurship and Competitiveness (MG) published an official notice for the acquisition of resources from the European Regional Development Fund (ERDF), measure 1.1.: Stimulation of Development of Innovation Environment for Direct Stimulation of Common Developed-Investment Projects in year 2006 and 2007 (Official Gazette of the RS no.33-34/2006, 31 March 2006).

At Kostak d.d. we made an application according to the above mentioned notice for the project The development of technology for removing debris, suspended material and sediment from water, before storage dam.

In this project we are cooperating with the following partners:

Project carrier: **Kostak komunalno stavbno podjetje d.d.**

Partner: **Timi Krško gradbeništvo d.o.o.**

Knowledge institution: **The University of Maribor, Faculty of Civil Engineering**

Knowledge institution – mediator: **Technology centre Posavje d.o.o.**

In this project we have developed technology for removing and treating water to remove debris, suspended materials and sediment from water before storage dam. A starting point of this project is to carry out the construction of a new hydroelectric power station on the lower Sava River, preserving the Sava River.

Both of our companies are concerned with caring for the environment and the pursuit of water quality in the construction projects that we are involved with.

The project focuses on the development of the technology for removing debris and suspended solids from the water and cleaning sediment from the water tanks before hydroelectric power stations, plus the development of further processes to recycle those wastes.

The purpose of this project is to give the theoretical and technical solutions and methods to enable a continual procedure for removing debris, suspended materials and sediments from the water, before it is stored at hydroelectric powers stations on the lower Sava River. The result of this project will be the use of natural resources, the introduction of a new technology and the development of processes that will achieve environmental goals, and

will enhance the personal and market strengths of business partners, educational establishments and mediators. We have formed a consortium between the partners involved in this project and all obligations are defined according to set aims and duties.

We propose to achieve the following goals:

- to develop a technology for removing debris, suspended materials and sediment from water before storage dam,
- to market a new service using this technology for cleaning lakes,
- to use products that are kind to the environment and are competitive and marketable,
- to create an innovative procedure through the execution of this service,
- to reduce unemployment and raise productivity,
- to create new business partnerships through this project and develop new services.

In addition to the above stated aims we will also pursue:

- regional development,
- environmental protection and the use of natural resources in removing water impurities and sediments,
- development of an information source within the company.

Strategic aims of the project to achieve the proposed results by the project conclusion

- preserve or increase in the number of employees,
- improve the knowledge base of the employees,
- increase of the value of employees whose posts will be preserved by this project,
- environmental protection.

The project work for this research and development project **Technology development for removing debris, suspended materials and sediment from water, before storage dam** includes the above mentioned activities from all the partners included in this project – Kostak Krško d.d. and Timi d.o.o., Faculty of Civil Engineering and Technology centre Posavje.

We have divided the activities in this project into two basic groups:

- carrying out of **development activities and research** for removing debris and suspended materials from water,
- **investments in suitable equipment** for removing and treating debris, suspended materials and sediment, before water storage.

We separate those two activities into three time periods:

- **Phase 1:** from 15 May 2006 – 31 October 2006 (or 31 January 2007)
 - *Selection of planned development methods and suppliers,*
- **Phase 2:** from 1 November 2006 (or 01 February 2007) – 31 May 2007
 - *Execution of technology for removing debris, suspended materials and sediment from water, before storage dam,*
- **Phase 3:** from 01 June 2007 – 31 December 2007 (15 September 2007)
 - *Evaluation of development activities and introduction of improvements.*

In addition to the set project aims we would like to achieve a good cooperation and an effective and interactive transfer of knowledge and experiences between cooperating partners, to create synergistic effects by carrying out this project.

Key words: .