

- **Experience in the process of matching the two project proposals 'Improving resilience in waste transports' and 'Design and development of a simulation tool for decision making in the management of health and safety based on Resilience Engineering, to promote a safety culture change process, in MSW treatment companies (ASSESS-RE-TOOL)'**

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 Co-operation between projects:  
 Improving resilience in waste transports (FIOH)  
 ASSESS-RE-TOOL (LIMASA-UMA-UDSDNFII)

## **1. Introduction**

This is a proposal of co-operation between two studies funded by SAF€RA. The objectives and methods of both studies are briefly presented here.

**FIOH** study focuses the preparedness of workers and organizations in waste transportation to the possible unwanted events and about the ability to maintain the preparedness. Being prepared for disruptions and changes helps reacting and continuing working without causing any extra delays and this preparedness increases safety, health and wellbeing of workers, which also improves the profitability of the company. When workers are able to react already for weak signals which may cause unwanted events in their work, this improves their ability in concentrating their actual task which improves their health, safety and empowering, as well as ability of continuing their operations regardless of the outcomes of unwanted events.

**FIOH** study will be performed in co-operation with two waste transportation organizations. The study consists of three different phases: 1) present state analysis which will be performed by analyzing data of unwanted events, and observation and interviews, and 2) questionnaire and interviews which will focus on waste transport workers' reaction for sudden changes and outcomes, and 3) further developing a tool for workplaces. The tool aims to increase the ability of identifying possible future threats by noticing weak signals for unwanted events.

**ASSESS-RE-TOOL** aims to develop a model to simulate prior to decision making, the impact of management actions on health and safety in the potential of the Resilience Engineering for solid waste treatment SME's, to promote a Health and Safety culture change process. To do so, RE assessment methods from the literature will be identified and previously analyzed and in any case the quantitative method developed by Shirali et al (2013) will be applied, in order to design an improved method adapted to a SME in the field of MSW, and then permitting the users to design a safety culture change process. Afterwards, this tool will be developed in computer programming support for ease of use.

**ASSESS-RE-TOOL** will be developed in LIMASA, through questionnaires filling. This project will include several phases: 1) Present state analysis will be run in relation to the identification in depth of assessment methods of occupational health safety management systems. 2) Checklists filling in LIMASA and in Living Lab in Italy by *Università Degli Studi Di Napoli Federico II*, Environmental Center, in waste treatment tasks, included data analysis. 3) Simulation method validation and software tool programming to implement model in waste management SME's.

## **2. Co-operation activities**

The co-operation between the two projects would be beneficial for both projects. The co-operation plan is presented here.

### **1. Questionnaire**

Both studies include a questionnaire. The research teams will consider of utilizing each others' questionnaires. Both study teams send their questionnaires to each other and each study team considers whether some of the questions could be added to own questionnaires. This co-operation provides a possibility to make some comparisons between the countries. The extent of commonly used questions will appear while the questionnaires are developed.

### **2. Information sharing**

Both study organizations participate in SAF€RA Symposiums in order to increase the co-operation and share the information of the projects. Sharing the information will also be performed via email and other communication models.

### **3. Dissemination of results**

The results of questionnaire analysis will be discussed between the two study teams. The dissemination of project results will be discussed between the two study teams and a conclusion of these two projects will be presented in SAF€RA meetings.

## **3. Discussion**

SAF€RA provides a good possibility to the co-operation for these two study projects which share some aspects but on the other hand have different point of views. The co-operation will be beneficial in order to share information between the two studies. In national level the information from another county may provide an opportunity to get new ideas.

Co-operation provided in this project may also be very fruitful in the future while creating new consortiums in different study calls.