



FINAL TECHNICAL IMPLEMENTATION REPORT

AUTHORS:

**MUNICIPALITY OF
VICENZA**

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AGREEMENT number: **ECHO/SUB/2013/661051**

Project title: **Action of Contrast to Hydraulic Emergency in Local Urban Site**

Acronym: **ACHELOUS**

Project duration: **January 1st, 2014 – December 31st, 2015 (24 months)**

COORDINATOR:	CO – Municipality of Vicenza (Italy)
ASSOCIATED BENEFICIARY:	AB1 – University of Padua (Italy)
ASSOCIATED BENEFICIARY:	AB2 – Municipality of Arad (Romania)
ASSOCIATED BENEFICIARY:	AB3 – Municipality of Paggai (Greece)
ASSOCIATED BENEFICIARY:	AB4 – University of Thessaly (Greece)
ASSOCIATED BENEFICIARY:	AB5 – Municipality of Borino (Bulgaria)
ASSOCIATED BENEFICIARY:	AB6 – City of Skopje (Macedonia)
ASSOCIATED BENEFICIARY:	AB7 – "For the North Great Plain Region " (Hungary)
ASSOCIATED BENEFICIARY:	AB8 – Virovitika – Podravina County (Croatia)



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1 PROJECT OVERVIEW

Project title: Action of Contrast to Hydraulic Emergency in Local Urban Site *Project acronym:* **ACHELOUS**

Involved countries: Italy, Greece, Bulgaria, Macedonia, Romania, Hungary, Croatia

Starting date: 01/01/2014 *Ending date:* 31/12/2015 *Duration:* 24 months

Coordinator and Beneficiaries

CO : Municipality of Vicenza (Italy)

AB1: University of Padua (Italy)

AB2: Municipality of Arad (Romania)

AB3: Municipality of Paggaio (Greece)

AB4: University of Thessaly (Greece)

AB5: Municipality of Borino (Bulgaria)

AB6: City of Skopje (Macedonia)

AB7: "For the North Great Plain Region" Nonprofit Ltd (Hungary)

AB8: Virovitica – Podravina County (Croatia)

Total project budget: 636.180 € *EC financial contribution granted:* 477.135 €

Actual final expenses: 611.495 € *EC financial contribution requested:* 458.621 €

Website: www.achelous.eu

1.1 Project objectives and expected results

ACHELOUS includes an area of 7 neighboring Countries and a total of 9 European partners that will work to achieve the following important objectives thanks to cross border cooperation:

- Improve the management efficiency of hydrogeological and hydraulic emergencies by means of a better territorial organization
- Improve the skills of Civil Protection local experts in the field of hydrogeological and hydraulic risk management
- Improve the management efficiency of the involved forces during an emergency operation (citizenship, vehicles, volunteers)
- Create stronger links between partners and the European Mechanism of Civil Protection
- Allow a real time control of the activated procedures during an emergency and guarantee an efficient monitoring action
- Educate citizenship towards a correct behavior and a clever use of the available information during emergencies

- Use transnational experience to develop the best emergency management process possible
- Establish a responsible and cooperative participation of citizenship during emergencies

2 GENERAL SUMMARY AND EVALUATION OF PROJECT IMPLEMENTATION PROCESS, ACTIVITIES AND DELIVERABLES

Task A - Project Management and Reporting to the Commission

Start Date	Planned / Actual: 1/01/2014	End Date	Planned / Actual: 31/12/2015
Actions			
Partnership Management - Financial Management - Monitoring and evaluation - Reporting to the Commission			
Deliverables			
1 Kick-Off Meeting in Brussels, First Progress report to the Commission, Second Progress report to the Commission, 6 Project newsletters for the partners, 6 periodic reports about the project activity for internal use, 3 Partnership Meetings (all partners), 4 Management meetings (coordinator – id necessary), 1 final meeting in Brussels			
Brief description and evaluation of implemented activities, technical results and deliverables			
<p>The general project management has been implemented without any problem or delay to report. The quarterly internal newsletters and reports was substituted by regular skype calls and frequent e-mail exchanges to exchange opinion and keep track of project state of the art. This has proved to be an effective way for keeping the group operative, to reduce costs and to find, on real time, the most effective solutions to implement and /or modify operative steps to achieve the project aim.</p> <p>4 partnership meetings was organized during the project, with active participation of all partners: : Vicenza (IT) 05-06/03/14, Thessaloniki (GR) 24-25/10/2014, Skopje (FYROM) 23-24/04/2015, Vicenza (IT) 9/10/2015. The final meeting (Vicenza, 10/12/2015) and the final public event (see Task G), originally scheduled in Brussels, were organized in Vicenza to ensure a greater participation of citizens, local entities, CP authorities and stakeholders.</p> <p>Two interim report was produced and submitted to the EC. The cooperation with the EU Commission has been of high quality and regular flash updates have been kept during the entire project period.</p> <p>There has been no need to organize additional restricted Management meetings.</p> <p>From Financial point of view, some budget shift among partners and among cost categories was needed, to implement the project activities in a more effective and fluent way. In particular, savings have been registered mainly in travels (thanks to the usage of Skype and the twinning of project meeting with other project events), other direct costs (savings in material production and dissemination costs, mainly) and external services (partners preferred to use internal staff whenever possible, thus increased personnel costs). At the same time, partners would need to use part of the project budget also to cover the indirect costs, even if not foreseen in the original proposal.</p>			

Task B - Creation of Local Risk Districts (LRDs)

Start Date	Planned / Actual: 10/02/2014	End Date	Planned: 31/05/2014 Actual: 31/12/2014
Actions			
Definition of the common criteria for the creation of the LRDs - Development of the monitoring system (I part) - Identifying and convening the District's representatives - Drafting and signing of the formal agreement			
Deliverables			
		Planned Date	Actual
1 Minimum guidelines report for creating LRDs		March 2014	Summer 2014
1 Monitoring system dedicated to LRDs		May 2014	Summer 2014
6 Local Risk Districts		May 2014	Summer 2014
1 ACHELOUS Risk District		May 2014	End 2014
6 local agreements for establishing the LRDs		May 2014	End 2014
Brief description and evaluation of implemented activities, technical results and deliverables			
In occasion of the first partnership meeting and as planned in the original project, it has been held one			

preparatory meeting for drafting the common criteria for the creation of the LRDs, which was finalized in the "Minimum guidelines report for creating LRDs" and a "Formal Agreement" draft by AB8 (PP responsible for the task). As for the LRD agreement, it has been decided that 2 versions would have been created for each LRD: one in English and one in local language.

Among April and August 2014, each partner autonomously worked within its territory for identifying the Municipalities to involve in the LRD, and sign the agreement with an official ceremony.

Due to political elections and Majors changing, the city of Paggiao in Greece, had to wait for formal LRDs agreement the end of 2014, but thanks to technicians and department managers, the activities have been conducted properly and in time without causing any delay on project schedule.

AB1 in cooperation with CO prepared the "Monitoring system dedicated to LRDs"(I part) in the form of a questionnaire meant to be a tool to monitor the LRDs' functioning from an administrative point of view.

Task C – Census of current local procedures

Start Date	Planned / Actual: 01/06/2014	End Date	Planned / Actual: 01/10/2014
Actions			
Workgroups Creation - Existing procedures census - Unique Project Document of local strategies (I part)			
Deliverables		Planned Date	Actual
6 LRDs workgroups		June 2014	June 2014
6 LRD documents (local strategies)		September 2014	September 2014
1 Unique Project Document of local strategies		September 2014	October 2014
Brief description and evaluation of implemented activities, technical results and deliverables			
After the LRDs have been established, the leading municipalities created local workgroups of technical experts to collect existing strategies against flood risk at local and national level. AB4 prepared a questionnaire to gather this information and later elaborated them in the "Unique project document of local strategies".			
Task C activity has been particularly interesting and useful because has constituted a concrete activity to be conducted within the LRD teams and which has therefore helped participants to feel actively part of ACHELOUS project. Moreover it has allowed to test the work group internal organisation, to see if it can be a successful way of sharing ideas and collecting territorial data.			
The produced documents have been shared among partners and further elaborated by AB4 – University of Thessaly. This constituted the common base of knowledge for the international training session held in Thessaloniki in October 2014 (Task D).			

Task D – Shared definition of the best practices

Start Date	Planned / Actual: 01/10/2014	End Date	Planned 28/02/2015 Actual: 31/10/2105
Actions			
- Technical workshop - Transfer of knowledge acquired to the LRDs - Development of the monitoring system (II part) - Unique Project Document of best practices (II part)			
Deliverables		Planned Date	Actual
1 five days' technical workshop		November 2014	October 2014
6 lists of best practices chosen at local level		January 2015	Winter 2015
1 Monitoring system (II part)		February 2015	October 2014
1 list of best practices chosen at project level		February 2015	Summer 2015
Brief description and evaluation of implemented activities, technical results and deliverables			
Task D activities were focused around the organization and participation to an International Training Session which was held in Thessaloniki, Greece, from October 20 th to 24 th , 2014.			
The five days Technical workshop was organized by the University of Thessaly in cooperation with the Municipality of Paggiao and the City of Vicenza and saw the participation of Italian National Civil Protection Department experts who facilitated the discussion of the best practices gathered by all partners within Task C. Main goals of the workshop were to exchange experiences on the damaging effects of water, the importance of early warning and disaster management and to cross Achelous Risk District best practices with CP external experts' experiences in order to align them with the European Civil Protection Mechanism and create a list of best practices at project level.			
In order to include comments about best practices tested during the local exercises, the Unique Project			

Document of Best Practices had been finalized at the end of Task E.
To measure the impact of the Technical workshop, AB6 in cooperation with CO, drafted the "Monitoring system document (part II)" in the form of a questionnaire to evaluate the reflection of the workshop issues on the organization and planning of subsequent CP exercises in Achelous LRDs.
In this way, the training session has constituted an important moment of dialogue and discussion at European level and has set the basis to proceed to the following Task E of separated modules testing.

Task E – Separated Modules testing

Start Date	Planned / Actual: 01/03/2015	End Date	Planned: 31/07/2015 Actual: 30/09/2015
Actions			
Planning of operational modules testing - Civil Protection Exercises and Real-Time Monitoring - Module Testing Evaluation Document (part III)			
Deliverables		Planned Date	Actual
5 Operational modules testing program		March 2015	Spring 2015
5 Civil Protection Exercises		April-June 2015	March-September'15
5 Videos Monitoring report of Civil Protection Exercises		April-June 2015	March-September'15
1 Module Testing Evaluation Document		July 2015	September 2015
Brief description and evaluation of implemented activities, technical results and deliverables			
5 CP local exercises to test the procedures identified in task C and further elaborated in task D, were organized within this Task, in the following dates: Virovitica (HR), 24-26/03/2015, Skopje (FYROM), 23-24/04/2015, Arad (RO), 26-28/05/2015, Borino (BG), 31/8-2/9/2015, Paggai (GR), 2-4/09/2015. <i>The final CP exercise has been organized as a separate Task (F) and was held in Vicenza on 9-11/10/2015.</i>			
All partners produced their own " <u>Operational module testing program</u> " following the common scheme agreed as follow: 1) Day 1- local exercise presentation + press conference; 2) Day 2 - local exercise implementation + debriefing (with support of the drone images filmed during the exercise, when available).			
Furthermore, each local exercise produced a " <u>Module testing evaluation Document</u> " to sum up strength and weaknesses of local organization and describing the added value brought by the international training session, Local Risk Districts organization and international cooperation.			
The objectives of the simulations were to check qualifications of local authorities to manage, organize and execute operations in cases of flood emergency and educating the population on how to behave in the event of a disaster.			
All events have involved a high number of citizens, volunteers, local authorities personnel. As documented in videos, press releases and photos available on project website, the exercises constituted a unique opportunity to disseminate project work and spread project results to a wider public.			

Task F – Preparedness Final Procedure

Start Date	Planned / Actual: 01/08/2015	End Date	Planned / Actual: 31/10/2015
Actions			
- Final exercise organization - Final exercise and real-time monitoring - Drafting of the best practice (IV part)			
Deliverables		Planned Date	Actual
1 Final Civil Protection Exercise program		September 2015	September 2015
1 Final Civil Protection Exercise		October 2015	October 2015
1 Video Monitoring report of Civil Protection Final Exercise		October 2015	October 2015
1 ACHELOUS final document (IV part and final)		October 2015	October 2015
Brief description and evaluation of implemented activities, technical results and deliverables			
The final CP exercise was held in Vicenza from the 9th to 11th of October 2015 with the primary scope to share with all other Achelous partners, the practices used by the Italian and local Civil Defence system on Italian territory and the lesson learnt during the disastrous flood that took place on 31st October and 1st November 2010 in the LRDs and other municipalities in Vicenza province.			
The drill was organized in two sessions: the first in Vicenza, calling for the activation of the command structures (Centro Operativo Comunale), the use of information technologies to support the Civil Defence and the set-up of flood-control measures. The second session took place in Montegalda, one of the LRD Municipality, and was based on operational interventions (different scenarios of human rescue). The University of Padua within its contribution to the project, prepared an innovative drone set to be controlled using a remote			

controller and programmed with the ability to transmit real time camera images to a shared server. It was employed to locate one of the victim of the rescue scenario in Montegalda.

A technology developed as part of the EU project WeSensit to involve citizens to send useful information (photo, videos etc..) to CP Operational Units during hydraulic emergencies, was tested and integrated in the drill scenario creating an important synergy which added mutual value to both projects' results.

Achelous final exercise has involved more than 200 volunteers plus Civil Protection Authorities (Mayors and Assessors) and expert. Has contributed to the success of the drill the involvement of 43 operative vehicles and means like pumps, generators, field tents (12), boat for fluvial rescue and other.

Task G – Publicity and Dissemination of the Results

Start Date	Planned / Actual: 01/01/2014	End Date	Planned / Actual: 31/12/2015
Actions			
- Planning promotional actions - Promotion - Networking with other projects on similar theme and a joint e-newsletter			
Deliverables			
1 Communication Plan, 1 Project official web site, Project interactive and web tools for communicating with citizens, Project official communication material (leaflets, gadgets, totems,...), Publications on local, national and EU press, 2 Civil Protection funded project newsletters, 6 Local Events, organized by each Project partner in occasion of the exercises, 6 Public Events for the presentation of LRDs, 1 Final event – strong involvement of citizens, local entities, CP authorities, stakeholders, 1 Layman's Report in electronic format			
Brief description and evaluation of implemented activities, technical results and deliverables			
Communication and dissemination activities were coordinated and organized in a highly fluent and efficient way throughout the project life by AB7, who developed and shared with partners a dedicated <u>Communication plan</u> (<i>containing the general guide lines to be followed by partners when communicating Project strategy, activities and results outside the project partnership</i>)			
Dissemination material was regularly shared through ACHELOUS Dropbox folder and this allow AB7 to keep the website updated with the contribution of each partner in the form of news, press releases, photos and videos of local or international events. This system has proved to be particularly effective during local exercises organization. <u>ACHELOUS leaflet</u> has been created in English and in local language version. AB7 team developed a <u>new interactive tool</u> (available on www.achelous.eu) to increase citizens' awareness towards flood events, prevention and resilience and to involve them and assure their active response in case of natural hydrogeological disasters. A <u>Layman's Report</u> in English and Italian has been produced both in papery and in electronic frm, to be distributed at the final event and trough the website.			
ACHELOUS has been moreover communicated in occasion of different international events held at EU level and through national, local and European magazines and newspapers. Furthermore, an important networking opportunity with the EU project WeSensit has been created during the final drill in Vicenza. (see task F)			

3 CONCLUSIONS & FOLLOW-UP

Project activities proceeded correctly and partners cooperated efficiently and in an operative way in order to find the most effective solutions to achieve the set goals. This sometimes resulted in a modification of the operative steps and time schedule for some tasks, which has been modified to allow a better evaluation of results and validation of project deliverables.

The European added value has expressed its maximum peak in the inventory of the existing strategies and procedures at local level for common problems such as severe flooding events management. These procedures were subsequently tested in each country to detect the most efficient and effective methodologies and, thanks to the cooperation and expertise of different CP experts, the solution delivered will be in the end used by local administrators for citizens increased safeness.

Partners are highly committed to ensure the valorisation and continuous improvements of ACHELOUS results also after the project conclusion. To this end:

- The experience of the LRD will continue in each territory. In addition, further actions for the creation of trans-border LRD are being studied, in particular between Greece and Macedonia

- More exercises on field will be held in order to stabilize the knowledge acquired during the Achelous Project experience
- The drone developed by University of Padua will be further refined in order to ensure an efficient support during the emergency management and also to put in field prevention activities through mapping and fluvial monitoring

In addition, all project documents will be let available to the public through the project website, that will be maintained and regularly updated for at least other 2 years.

Civil Protection Department Director

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