



Final Technical and Financial Report

JFWEDROP

"Joint Force Water Environment Disaster Relief Operations Platform"

Grant Agreement Number: ECHO/SUB/2013/663520 for an action with multiple beneficiaries. Planning, Conducting and Evaluating of Task A,B and C1 of the Joint Force Water Environment Disaster Relief Operations Platform"

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- **PROJECT OBJECTIVES, PARTNERSHIP and EXPECTED DELIVERABLES**

Objectives

1. **To develop a multiagency-multinational operational platform to develop best practices for water emergencies aiming at searching, rescuing and recovering of missing persons in water environment;**
2. **To define the minimum requirements for an operational asset called JFWEDROM (Joint Force Water Environment Disaster Relief Operations Water Environment Module);**
3. **To ensure all the necessary expertise for carrying out WEDRO operations including the following operations: planning and management of multiagency and multinational operations; surface WEDRO in sea, lakes, rivers and flooded areas; underwater WEDRO (using various techniques: e.g. Surface Supplied Systems, SCUBA, Speleo-Sub); underwater WEDRO using sonar systems and ROVs (Remotely Operated Vehicles); WEDRO using ropes; use of explosives to clear access ways/gates; operating in contaminated water environment.**

Partnership

It is conducted by the Italian Civil Protection Department (ICPD), as coordinator, and the following partners: CFOA National Resilience Limited, established in United Kingdom, Swedish Civil Contingency Agency in Sweden and Studiare Sviluppo in Italy. The National Operational Centre of The Netherlands will participate as observer.

The project aims at defining a proposal to be submitted to the European Commission for a new civil protection asset for water disasters. The experts will provide the Commission with performances minimums and standards for the registration of the new module and with operational recommendations.

Deliverables

1. **A JFWEDROP module, whose tasks include: combined underwater and/or surface technical capacities for location, search, rescue or recover of victims in submerged or partially submerged built environment.**
2. **JFWEDROP website: An online web platform allowing participants to exchange and share information about the project .**
3. **GUIDELINES FOR JFWEDROPERATIONS - A description of the objectives, deployment and operational procedures of the JFWEDROP for nations that will provide a JFWEDROP module.**
4. **A proposal of a Training Programme.**



- **GENERAL SUMMARY OF PROJECT IMPLEMENTATION PROCESS**

- **General overview of the process**

The project was organized and carried out as a gradual and involving learning process: each of the 4 workshops held, was a prerequisite for finalizing and summarizing previous topics and starting the following one.

The starting point was the analysis of case studies of the most significant maritime emergencies recorded and responded to. Response models were compared in order to provide the basic understanding in terms of performance and organization required.

Representatives of operational agencies from all beneficiaries have defined, in a common understanding, the most appropriate features and components required for a JFWEDRO asset according to the general terms defined in the Commission Decisions 2008/73 and 2010/481, laying down rules for the implementation of the modules concept under the Mechanism describing:

- ✓ tasks
- ✓ capacities
- ✓ main components
- ✓ self sufficiency
- ✓ deployment

Once the module was clearly defined in terms of features and capabilities, a proposal of a training programme to be used for implementation . (Action D.1).

The achievement of the Project objectives was supported by the creation and maintenance of the project website and documentary platform, with uploads of all relevant material.

- **Comparative analysis of**

- Initial and actual time schedule:

Project Acronym		JFWEDROP		
Task ID	Task Title	Start Date	Planned end date	Actual end date Date
A	PLANNING	March 2014	July 2014	July 2014
B	DESIGN	July 2014	Dec 2014	Dec 2014
C	EXERCISE	Dec 2014	Sept 2015	Nov 2015
D	TRAINING and DISSEMINATION	Nov 2015	Dec 2015	Feb 2016
E	FINAL PROPOSAL	Dec 2014	Dec 2015	Feb 2016

- Planned and used resources:

Thirteen experts were invited from each partner country representing Fire Brigade, Coast Guards, Cave Rescue Alpine Corps, Navy, Carabinieri. During workshop I the need for an increase in the number of experts arose. The Commission approved this.

- Expected and actual results:



At the end of the Project, it can be concluded that: although emergencies of this type are exceptional, maritime disasters occur every year and in the light of the consequences of these events, it is important to focus and learn from past experiences. The aim of all the different phases has been to design the structure of the JFWEDRO asset, minimum standards of operations, list of technologies, expertise and management requested, as well as defining how to ensure a rapid deployment worldwide. All aims were met.

- **EVALUATION OF PROJECT MANAGEMENT/IMPLEMENTATION PROCESS**

- **Positive aspects/opportunities**

The overall and general evaluation of the project has been highly positive: the experts and all participants involved appreciated both the quality of the technical discussions and the friendly and easy working environment. The possibility to meet and discuss both technical and practical issues with other international experts were seen as an invaluable added value. The main lesson learnt is that the analysis of experience gained during previous events was beneficial to the development of models and modus operandi for potential future incidents.

The sharing of material and documents through the website has also been appreciated and useful for discussion.

- **Internal and external difficulties encountered**

There were initial difficulties in having a common understanding of the aim of the project thus not all experts were right for the project. Once this was overcome the identification of suitable experts to be involved was done. From then on the groups created worked well.

As a consequence of the discussions held among the experts during Workshops II and III, it has been decided that an additional meeting was necessary in order to better organize the Exercise in November. It has taken place in July in La Spezia and has given the participants the opportunity to define the details of the scenario and evaluate all logistic aspects. Moreover, the visit on site has helped to assess more realistically the number of players and participants in the two phases of the Exercise (TTX and Full scale).

- **Partnership/core group cooperation (as appropriate)**

In the initial phase, it took a while before all participants had a common understanding of the purpose of the Project. The mixture of technocrats and technicians, initially resulted in a clash of ideas. The role played by “facilitators” during all the duration of the Project (workshops, Exercise and the activities performed to prepare them) helped the group to overcome the initial impasse driving all to a proper conduction of the discussion and identification of the objectives. The facilitators had a deep knowledge about the Union civil Protection Mechanism (especially in terms of resources, training, procedures and legal framework) and were experts in disaster management.

The cooperation among partners could benefit from this working methodology and a friendly and collaborative approach has marked the relationships through all the various phases of the Project.



- **Cooperation with the Commission**

The European Commission Desk Officer in charge of the Project have been supportive and cooperative during the overall implementation.

- **Comments on European value added**

Incidents that occur in all water environments, such as tidal flooding, tsunamis (where there is a need to rescue people under water), built environments, storms etc. are very complex and must be managed in an efficient and professional manner.

The JFWEDROP project aims at improving the response and coordination to similar disasters.

The cooperation between member states will improve the knowledge about each other competences, materials and routines, and the identification of best practices in the field leading to a harmonization of procedures.

By harnessing the strength of the civil protection system within EU, we will be able to improve response and coordination in order to be better prepared to save lives.

The JFWEDROP module will enhance the ERCC capacity to respond to maritime incidents involving passengers, and allow it to play a more active role.

- **Lessons learnt and possible improvements**

The aim of the project should have been more clear in its description and requirements for participants prior to the start of the project.

Resources in terms of number of participants and time needed should have been estimated better.

Both issues were identified at the early stages of the project and the staffing and time needs were adjusted accordingly.

- **ACTIVITIES**

- **Comparison between initially planned and actually implemented activities, including monitoring, evaluation and dissemination**

The activities have been implemented as planned, with the sole exclusion of the postponement of the final workshop and the cancellation of the final meeting in Brussels which was not considered to add value to Grant's results.



Activities were organized as follows:

During the first Technical Board Workshop (TBW) (Rome, 9-11 June 2014), the beneficiary countries examined and analyzed case studies of the most significant maritime emergencies from the recent past. Response models were compared so to provide the basic understanding in terms of performance expected and organization response required for a JFWEDRO asset.

The second workshop (Karlskrona, 3-5 November 2014) began resuming the results of the first TBW and explaining the expectations of the second. The experts were divided into 3 groups and each of them focused on one of the following aspects: a) when is it necessary to activate a JFWEDRO asset?; b) define minimum capacity of a JFWEDRO asset; c) National/International components of JFWEDRO.

During the third workshop (Maidstone 9-11 February 2015) the participants continued finalizing the operational Guidelines and the JFWEDRO asset requirements.

The Fourth Workshop (Le Grazie di Portovenere (La Spezia) 5-8 July 2015) continued finalizing the Guidelines and the objectives, scenario and organization (logistics, transport, accommodation, HNS) for the following exercise.

The Exercise took place at Le Grazie di Portovenere (La Spezia) in Regione Liguria at the Navy Base Teseo Tesei from the 2nd to the 5th of November 2015 and was composed of a table top exercise dedicated to the Assessment Team as an introduction to the FSX – Full Scale Exercise Scope of the TTX–Table Top was to have a quick evaluation of the proposed situation and formulate a strategy of intervention following the JFWEDRO Guidelines while all FSX-Full Scale activities were conceived in order to observe and evaluate decision making process, use and value of JFWEDRO Guidelines, flow of communication and operational solutions adopted. Finally, FSX exercise has offered the opportunity to test and evaluate the design and the structure of JWEDRO asset. The exercise also served as an opportunity to identify adjustments needed before a final proposal is submitted to the Commission. A technical debriefing took place on the late afternoon of November the 4th.

A group of observers from the countries participating in the Union Civil Protection Mechanism participated as evaluators.

There was no referral scenario but only operational situations allowing Assessment teams, Scuba divers, L2/L3 and TRO assets to test operational procedures as established in the JFWEDRO Guidelines.

The exercise started providing the ERCC Questionnaire (there was no ERCC duty officer playing; the activity was simulated) to Assessment teams as established by JFWEDRO Guidelines so to formulate an initial picture of the single event.

There wasn't a mission briefing at ERCC nor team deployment activities as it usually happens when it comes to Modules based exercises; these were not objectives of the exercise.

HNS was only tested as a support to divers and TRO on site. The situations always referred to a kind of disaster (during TTX there were four real cases) taking place in water environment which required search and rescue operations including diving activities.

During FSX, divers searched for bodies in water using the techniques and procedures the project is aiming at developing. The participants were mainly divers (or people working in SAR activities) belonging to the agencies participating in the consortium.



The teams tested pilot asset solutions as result of the project. Apart from diving activities, team management, logistics, liaison, safety issues and other functions were tested.

An EXCON was set in the Navy Base Premises so to allow a proper conduction and control on all the different aspects of the exercise.

This exercise was a very positive start and gave a great opportunity to test the draft guidelines.

During the Fifth Technical Board Workshop (Rome 17-19 February 2016), the participants, observers and evaluators feedback notes were analyzed and positive and negative lessons learned identified, and necessary changes or modifications were suggested and implemented in the final version of the Guidelines. **Annex 2**

Furthermore, a rough outline of a proposal of a future training programme and the elaboration of a final proposal were discussed.

This module will provide an opportunity to pool together all the different experiences in order to offer a standard module for other participating states.

The module will therefore be developed and implemented by joining forces of all participating states to build the same basic characteristics capable of ensuring full interoperability and improve resilience.

This will contribute to overcome incidents at sea in a coordinated way which is expected by European countries and lead to life being saved.

All activities were to test practically of the proposed JFWEDRO module during the different phases of an operation: activation, deployment and operation of the multinational asset. Evaluation of modules' performance during the exercise and following corrections were done according to the plan.

The workshops have been conducted as planned, and according to the agenda which has been agreed with the participants in order to have the highest and most effective participation.

Compared to the initial agenda, a time extension has been requested and approved in order to postpone the organization of the 5th workshop in February. In addition, as agreed with the EC the final meeting in Brussels has been cancelled and the final discussion has been included in the 5th workshop.

As regard to the use of the resources, some minor amendments have been requested in order to align the implementation to the needs emerged during the first meeting, including to increase the number of participants up to 17.

- **Qualitative evaluation of the activities**

The un-clarity of the how to meet the aims and objectives caused a delay and a need for a change of participating experts. The timings of the exercise were changed due to other activities of the participants. This was however, solved during the process at a very early stage, in agreement



with the Commission, and the integration of a facilitator during the workshops secured that the objectives of the project were met.

- Exercise was well planned and managed throughout. The strict application of timetable for the rotations added realistic pressure encouraging completion of task efficiently. Breaking the exercise into TTX and FSX enabled a through trialling of the application of the guidelines for several incident types and exploring how different countries would tackle operational requirements.

- **PRESENTATION OF THE TECHNICAL RESULTS AND DELIVERABLES**

- **Description of individual deliverables**

- ✓ A JFWEDROP module, whose tasks include: combined underwater and/or surface technical capacities for location, search, rescue or recover of victims in submerged or partially submerged built environment.
 - ✓ JFWEDROP website: An online web platform allowing participants to exchange and share information about the project .
 - ✓ GUIDELINES FOR JFWEDROPERATIONS - A description of the objectives, deployment and operational procedures of the JFWEDROP for nations that will provide a JFWEDROP module.
 - ✓ A proposal of a Training Programme Annex 1.

- **Evaluation of the deliverables**

The deliverables are following standards and formats fully applicable to the Union Civil Protection Mechanism (UCPM). Furthermore they are developed by a pool of experts with worldwide underwater rescue activities thus ensuring a high level of quality.

- **Value-added – in particular European value-added and transferability - of the deliverables**

The JFWEDROP module will enhance the ERCC capacity to respond to maritime incidents involving passengers. ERCC will be able to take a more active role By following the UCPM standards the elements, or parts hereof, can easily be acquired and implemented by other European states.

- **Dissemination**

Dissemination of results has been pursued mainly by involving a greater number of stakeholders during the seminars and activities.

In addition, the JFWEDROP website served as an online web platform allowing participants to exchange and share information about the project and as reference place for all other stakeholders interested.



- **EVALUATION OF THE TECHNICAL RESULTS AND DELIVERABLES**

- **General lessons learnt**

The combined knowledge and experience from the broad variety of experts added considerable added value to the quality of the deliverables.

Though differences in national modus operandi the process proved that cooperation between national teams is indeed possible

- **Strengths**

The skills of the experts were of high level and this has guaranteed the coverage of all technical and management aspects in the development of such an asset.

- **Possible challenges and/or improvements to be tackled through further actions**

Reinforce use of the website as a working tool and not only as a communication hub. Full functionality of the website is a must.

Host nation legislation has not been taken into consideration. There might be restrictions limiting the operations of the module. This has to be further explored.

The ERCC role or function was not tested to the full extent since this was performed by a role player

- **Recommendations to stakeholders, partners, authorities in charge, National and EU institutions**

Partners and national and EU institutions should be made aware of the result of this project, with specific regard to the possible improvement mentioned in the point above. EU Grant is a powerful tool to implement these actions and further funding should be encouraged.

- **FOLLOW-UP**

- **Comparison between initial and current follow-up measure**

There were not need to change the follow-up measure compared to prevision.

- **Additional follow-up approaches**

Proposal to the European Commission for the adoption of JFWEDROP guidelines for the establishment of minimum requirements for the Team of Divers (as considered in other resources of the new legislation).

The Italian civil protection Dept. and partners would be very honoured if DGECHO finds the project interesting.



Proposal: a meeting could be organized with DG ECHO Commission services to analyse possible development of JFWEDROP as standard for diving teams under the umbrella of the Mechanism.

ANNEX 1

Training

Each nation that provides personnel to the JFWEDROP module is obligated to keep team members competent and familiar with the SOPs and guidelines.

National

Practical Communication exercise

Each year the nation should also arrange a no-notice communication and mobilization exercise for the module. This exercise should be done together with the nations JRCC/ERCC.

Table Top

Each year the nation should also arrange a Table Top exercise for the Assessment Team and Incident command structure. The focus should be to use the CRIP concept (annex 4). Every third year the Table Top exercise should be scheduled shortly prior to the practical exercise. The practical exercise will follow the Table Top scenario.

International

Every *third* year one of the JFWEDROP module will facilitate a practical exercise. Later that year there should be a field exercise. The objective would be to exchange information, competences and train together for development of the international cooperation.

Quality Assurance

Observation/evaluation

Observers and evaluators from other countries should be invited to carry out evaluation and feedback to the exercise personnel to improve process.

Lessons learnt will be feedback to exercise participants by debrief and written evaluation report. This will be shared throughout the group

Annex 2



Exercise Lessons Learnt

The strict application of timetable for the rotations added realistic pressure encouraging completion of task efficiently. Breaking the exercise into TTX and FSX enabled a through trialling of the application of the guidelines for several incident types and exploring how different countries would tackle operational requirements. It might have been possible to add further detail and requirement to both the TTX and FSX but whilst the JFWEDROP module is still in early development it may have just delayed the exercise process and not lead to any learning benefit. FSX gave good opportunity to compare alternative ways of solving a problem but at the end of the day there was a commonality of approach indicating that the guidelines could be developed further defining capability.

Due to constraints of exercise all teams had similar numbers but all were able to deal with both the TTX and FSX. For future development it might be able to indicate expected team size linked to operational capabilities. Any future exercise could include more investigative work on behalf of the team commander/coordinator by using a LEMA type set up.

The use of the CRIP (commonly recognised information picture) added good structure to decision making and planning promoting the use of logical process. CRIP will benefit from additional field testing. Intel team might be better named assessment team. Many thought that this better reflected their role. Assessment team could be made up of personnel from more than one country similar to EUCPT as long as this did not lead to delays to the mobilising of rescue resources.

It was found out that you can operate with different nationalities in one JFWEDROP module if this is trained and the different routines are known. This is not the same as mixed team members in the different parts of the modules.

A good assessment of the situation, regarding the needs and available capacity and capability is crucial. It is up to the dive supervisor and the team leader what they use in which situation, but the guidelines should provide what capability and capacity is needed to bring to the location.

Moreover, on or near by the location of the incident a coordination centre for the coordination between the different delivered teams, from different organizations and different countries, is necessary.

The process of involvement of the ERCC, and checking the effectiveness and usefulness of the guidelines has not been tested.