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EAST AEGEAN RIVER BASIN DIRECTORATE

Plovdiv, Central poste P.B. 307, 35 Yanko Sakazov Str. tel/fax: 032/60-47-21, e-mail: bd\_plovdiv@abv.bg

Ref. № *PA-09-367*  
Plovdiv, *02.11.2016*

To  
**DIMITAR ATANASOV**  
**CONSORTIUM "PLOVDIV 2014"**  
**85-3 SIMENOVSKO SHOSSE BLVD.**  
**OFFICE 12A**  
**SOFIA 1700**

## REFERENCE

This reference is issued by East Aegean River Basin Directorate certifying that Consortium Plovdiv 2014 composed of the following companies:

Leader – ARCADIA ENGINEERING Ltd., address: 15 Arsenalski Blvd., apt.17, fl.7, Post Box 17, Sofia 1421, Bulgaria; UIC 200 615 950

With partners:

Remote Sensing Application Center - ReSAC, address: 61 Tsar Asen Str., fl.2, Sofia 1463, Bulgaria; UIC: 131453380

„Hydroproekt – Sofia“ Ltd., address: 9 Patriarh Evtimii, Sofia 1142, Bulgaria; UIC: 130873828 and

the subcontractor – Artelia Eau & Environnement, France

is a Contractor under a public procurement according to Contract Д-ОПН-22/04.05.2015 concluded with East Aegean River Basin Directorate with subject:



National  
Strategic  
Reference Framework  
2007 – 2013

*This document has been prepared in connection with project "Preparation of Flood Risk Management Plans" funded under Priority Axis 1 of OP "Environment 2007 – 2013"*



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**Preparation of Flood Hazard Maps and Flood Risk Maps Within the Territory of the East Aegean River Basin Directorate under Project № DIR-51211229-1-171 "Preparation of Flood Risk Management Plans" funded by grant BG161PO005/12/1.20/02/29 under Priority Axis 1 "Improving and developing of the infrastructure for drinking water and waste water" of Operational Programme "Environment 2007-2013".**

The areas at potential significant flood risk within the territory of East Aegean Region are 31 with total length of 1077 km. The activities under the contract were distributed to the main river basins, as follows:

- ✓ Basin of Maritsa River – 18 areas with total length of 805 km;
- ✓ Basin of Tundzha River - 5 areas with total length of 207 km;
- ✓ Basin of Arda River: 8 areas with total length of 65 km.

Duration of contract: 8 (eight) months.

Total value of the contract in the amount of 1 649 285 BGN, VAT excluded.

The following activities under the contract were included in the task:

- **Preparatory activities and an inception report.**

- **Geodetic measurements and a digital terrain model with a 3D integrated river bed of the Arda River, Tundzha River and Maritsa River (1077 km).**

- **Hydrological studies** - preparation of functions of the probability distribution and determination of maximum water quantities with 5%, 1% and 0,1% security (respectively 20, 100 и 1000 annual recurrence). Establishment of generalized key curves at the hydrometric stations that fall within the zones that should be modelled, determination of regional dependencies, etc.

- **Hydraulic studies and establishment of 1D and 2D hydrodynamic models,** including constructing a hydraulic model, calibration of a hydraulic model, validation of a hydraulic model. Examination of the results of the hydraulic modelling.

- **Flood Hazard Assessment (draft and final version of flood hazard maps).** Determining floodplains in different scenarios through crossing of the water surface obtained from the hydraulic modelling and the digital terrain model.



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- **Flood Risk Assessment (draft and final version of flood risk maps)** - preparation of maps of the elements of risk that fall into the scope of the hazard territories for certain scenarios.
- **Establishment of geodatabase for each area at potential significant flood risk (APsFR) with interim and final results and preparation of the information for reporting.**
- **Determining uncertainty.**
- **Preparation of reports and a final version of flood hazard maps and flood risk maps.**

The activities were performed according to the Directive on the assessment and management of flood risks (Directive 2007/60/EC), Water Act and other existing regulations.

The envisaged activities were carried out qualitatively with the necessary professionalism and according to the terms of the contract.

ENG. GEORGI SEMERDZHIEV

*Director of East Aegean River Basin Directorate  
and Head of Beneficiary*



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