

Analysis of the selected location in Greece for the installation of one IDSL Sensor



On September, 11th 2015, a survey was conducted by Gerassimos A. Papadopoulos (GEIN/NOA) and Daniele A. Galliano (JRC) in order to verify the precise positions for the installation of an IDSL device (Inexpensive Device for Sea Level Measurement) in the frame of the initiative between JRC and UNESCO for the installation of a series of mareographs in the NEAMTWS area (North East Atlantic and Mediterranean Tsunami Warning System).

The objective of the survey was the verification of a number of conditions to have a secure and correct installation of the devices and in particular:

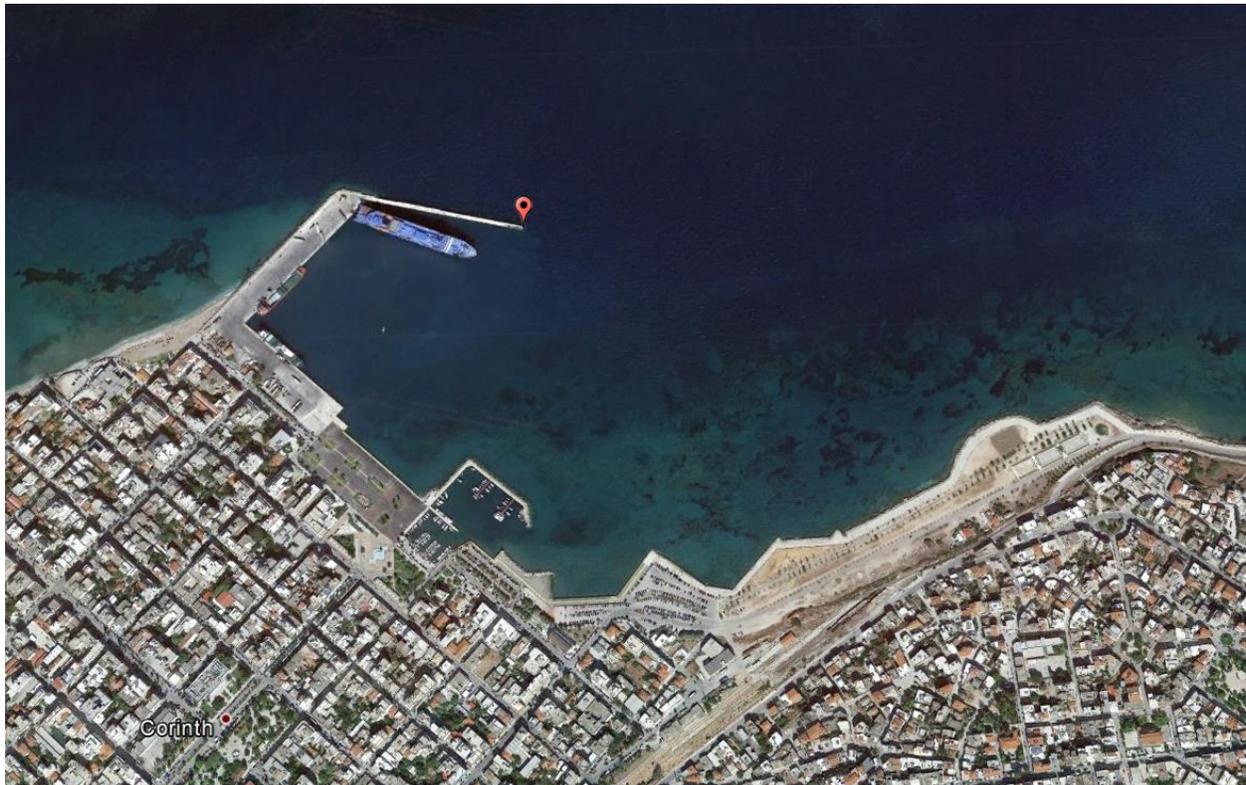
1. The location should be easily accessible in case of necessity
2. The device must be installed with the sensor that is looking the sea level vertically below the sensor
3. The distance between the sensor and any obstacle around must be at least 1 m
4. The water depth below the sensor needs to be at least 1.5 m at the minimum tide level
5. The location must have a good GPRS connection (3g or 4g)
6. The area below the sensor should be kept free all the time
7. The installation has to be as close as possible to the open sea water to avoid delay in the hydraulic signal
8. Security of the place should be guaranteed as much as possible: an installation in a completely isolated place could result in potential vandalism or robbery

A suitable position was found. GEIN/NOA will provide the technical assistance for the installation and the installation can be programmed and realized in about thirty days.

1 PORT AUTHORITY OF CORYNTH

An inspection of the sea side of Corynth, right west of the city centre, showed that only inside the Port Authority base it was possible to install an IDSL without the risk of vandalism.

The Port Authority can host many big boats, which moor on the three sides of the port, leaving no place suitable for the installation, but near the green light, housed at the far end of the closing arm of the harbour as shown below.



SURVEY REPORT FOR THE INSTALLATION OF JRC TIDE GAUGES



Location	Corynth, Greece
Type of location	Naval base
Analysed places	37.945192°, 22.936536°
Presence of AC	No
Presence of LAN	No





This location has many advantages, being in a city close to Athens and under surveillance by the Navy. Even if the IDSL is not designed to operate inside a harbour, Corynth's gulf is big and waves are not dampened, producing signals of great interest.

Boats are supposed to manoeuvre at a certain distance from the green light, thus reducing their interference with the high sampling frequency of the IDSL.

SURVEY REPORT FOR THE INSTALLATION OF JRC TIDE GAUGES

Location	Naval base
The location should be easily accessible in case of necessity	Yes
The device must be installed with the sensor that is looking the sea level vertically below the sensor	Yes
The distance between the sensor and any obstacle around must be at least 1 m	Yes
The water depth below the sensor needs to be at least 1.5 m at the minimum tide level	Yes
The location must have a good GPRS connection (3g or 4g)	4g
The area below the sensor should be kept free all the time	Yes
The installation has to be as close as possible to the open sea water to avoid delay in the hydraulic signal	Yes
Security of the place should be guaranteed as much as possible: an installation in a completely isolated place could result in potential vandalism or robbery	Yes

The mast supporting the sensor cannot be installed directly facing the sea: the water raise at about 40 cm below the walk level, while we require about 1.5 m of the mast to be secured against the wall for sake of stability. In this location, without any AC provision, the mast will support also a solar panel, thus requiring to be 3.5 m tall.

The mast can be secured against the white wall or partly against the walk and partly against an additional structure (see below). Being the sensor support 1.5 m long, in both cases the sensor will be at least 1 m away from obstacles (the mast is attached to the wall with supports 20 cm long).

On the sidewalk a gate may be installed to prevent free access to the sensor.

SURVEY REPORT FOR THE INSTALLATION OF JRC TIDE GAUGES



2 CONCLUDING REMARKS AND ACTIONS

The survey was positive for the location proposed. The activities to be done follow.

#	Description	Responsibility	Deadline
1	JRC prepares the device	JRC	28.09.2015
2	JRC tests the device	JRC	07.10.2015
3	To transfer the mareograph material for installation	JRC	After 2
4	Obtain authorization to install the device	GEIN	-
5	Organize installation of the mareographs	GEIN-JRC	After 4