

**LIFE CONOPS (LIFE12 ENV/GR/000466)**

Development & demonstration of management plans against -  
the climate change enhanced-invasive mosquitoes in Southern  
Europe



## FINAL MEETING

***“Sustainable invasive mosquitoes management  
following the LIFE CONOPS initiative”***

**EMILIA-ROMAGNA REGION**

**BOLOGNA**

**THIRD TOWER CONFERENCE ROOM**

**16-17 APRIL 2018**

### Organisers:

Servizio Prevenzione collettiva e Sanità Pubblica Regione Emilia-  
Romagna (PH Emilia-Romagna)  
AUSL della Romagna (AUSL Romagna)  
Centro Agricoltura Ambiente “G.Nicoli” (CAA)

### In cooperation with:

Benaki Phytopathological Institute (BPI)  
Agricultural University of Athens (AUA)  
Institute of Urban Environment & Human Resources (UEHR)  
NCSR Demokritos  
ONEX  
Panteion University (Panteion Univ.)  
Terra Nova Env. Engin. Cons. Ltd (Terra Nova)



The LIFE CONOPS project is going to close the activities the next November 2018.

The most important achievements and the follow up program will be presented and discussed in a large audience where the most important EU sponsored projects dealing with vectors and vector borne diseases will be also represented.

The problem pose by the Invasive Mosquito Species (IMS), such as *Aedes albopictus*, *Aedes aegypti*, *Aedes atropalpus*, *Aedes koreicus*, *Aedes japonicus*, *Aedes triseriatus*, is well evident on the EU scenario by the increasing number of detections in different EU countries and because of the public health risk related to the vector capacity of some of these mosquitoes.

Frequent outbreaks of chikungunya and dengue viruses, efficiently transmitted by *Ae. albopictus*, have been detected in Southern Europe in the last years. Responsible of vector surveillance and control in EU member States should consider the need to increase their capacities to conduct preventive and control activities.

After decades of absence, *Ae. aegypti* is recorded again in some European areas (Southern Russia, Abkhazia, Georgia and Canary Islands), and it has been the vector of the recent Dengue 1 epidemic in Madeira (Portugal) with about 2,000 cases. This species is an extremely efficient vector of Dengue, being responsible for the most serious documented dengue virus epidemic in Europe in 1927-1928, when about 90% of the population of Athens where infected and more than 1,000 persons died.

Current models estimate some risks for dengue transmission in the Mediterranean basin and increasing risk related to climate change impact. Countries of the Mediterranean basin are particularly exposed to mosquito borne diseases due to the high mosquito population densities and the extended seasonal period of mosquito activity.

The LIFE CONOPS project was able to improve the early detection capacity in case of new IMS, in Greece and Italy, therefore increasing the feasibility for their immediate elimination, before IMS establishes on large area.

In order to increase the efficiency of IMS surveillance a prototype mosquito trap system has been developed combining the advantages of the most effective mosquito attractants and trapping methods. New biodegradable substances such as Mediterranean plant derived essential oils has been developed and tested for their efficacy in controlling IMS without harming the ecosystems. Their possible role in the frame of integrated management plan is envisaged.

The socio-economic costs caused by the IMS introduction and establishment has been estimated by considering possible multiple impacts on human and animal health, inducing changes in the life style, required control operations and educational programs. Mosquito management require efforts from both the public as well as the

private sectors. Private costs afforded by the Emilia-Romagna citizen to protect themselves from *Aedes albopictus* have been analyzed providing considerable amount of data useful to assist policy planning.

Some of the LIFE CONOPS developed key actions will become permanently included in the duties of public health bodies and mosquito control agencies, to guarantee the:

- continuation of the surveillance activity in risky point of entry, with the use of the prototype devices;
- continuation of the dissemination activities through articles publications and interviews;
- maintenance update of the LIFE CONOPS website (<http://www.conops.gr>) for at least five years after the completion of the project as a tool to support public health authorities in Greece and Italy and as a dissemination platform for the IMS in both countries, in order to enable data transferring between the beneficiaries.

**Monday, 16<sup>th</sup> April 2018**

**Conference room "20 Maggio 2012" Third Tower  
V.le della Fiera 8, Bologna**

***9:00-10:00 Registration***

**Chairperson: Franco Zinoni (ARPAE Emilia-Romagna, Italy)**

10.00 **Adriana Giannini (PH Emilia-Romagna, Italy):** Welcome address

10.10 **Antonios Michaelakis (BPI, Italy):** General introduction to the LIFE CONOPS project.

10.30 **Efthimios Tagaris (NCSR Demokritos, Greece):** Estimating climate change for Southeast Europe: a dynamical downscaling approach.

10.50 **Andreas Sotiropoulos (Terra Nova, Greece):** The effect of climate change on the risk for Invasive Mosquito Species in Southern Europe.

11.10 **Ioannis Spanos (Terra Nova, Greece):** Prototype Monitoring Device: a new tool to assist the surveillance of invasive mosquito species.

11.30 **Romeo Bellini (CAA, Italy):** A complete management plan for *Aedes albopictus*.

11.50 **Serkos Haroutounian (AUA, Greece):** Essential oils as potent biocides for mosquitoes' control.

12.10 **Luciano Donati (CAA, Italy):** The door-to-door strategy against urban mosquitoes.

12.20 **Roberta Colonna (CAA, Italy):** Quality control for better mosquito management.

12.40 Open discussion

***13:00-14:30 Break***

**Chairperson: Antonios Michaelakis (BPI, Greece)**

14.30 **Konstantinos Bithas & Antonis Kolimenakis (UEHR, Greece):** Socioeconomic evaluation of the mosquito management plans: an holistic approach of citizens and experts.

14.50 **Stefano Rivas Morales & Massimo Canali (University Bologna, Italy):** Cost assessment of the Emilia-Romagna *Aedes albopictus* regional management plan.

15.10 **Laura Vici, Stefano Rivas Morales & Massimo Canali (University Bologna, Italy):** Analysis of households' private expenditure for protection against *Aedes albopictus* in Emilia-Romagna.

15.30 **Claudio Venturelli (AUSL Romagna, Italy):** Educating young citizen and "Political Refugees" for better future.

15.50 **Carmela Matrangelo (AUSL Romagna, Italy):** *Aedes albopictus* control assisted by ovitrap data.

16.10 Open discussion

**Tuesday, 17<sup>th</sup> April 2018**

**Conference room “20 Maggio 2012” Third Tower  
V.le della Fiera 8, Bologna**

**Chairperson: Paola Angelini (PH Emilia-Romagna)**

9.30 **Luciano Toma, Marco Di Luca (National Institute of Health, Italy):** The status of the vector borne disease risk in Italy.

9.50 **Annita Vakali (KEELPNO, Greece):** The status of the vector borne disease risk in Greece.

10.10 **Gregory L’Ambert (EID Littoral Méditerranéen, France):** The French system in the management of *Aedes albopictus* borne diseases.

10.30 **Donatella Varrenti (PH AUSL Anzio, Italy):** The management of the 2017 Chikungunya epidemic in Anzio.

10.50 **Roberto Cagarelli, Andrea Mattivi (PH Emilia-Romagna, Italy):** Results of the Emilia-Romagna regional surveillance system for vector borne diseases

**11:10-11:25 Break**

**Chairperson: Serkos Haroutounian (AUA, Greece)**

11.25 **Francis Schaffner (FS Consultancy, Switzerland):** VectorNet 2015-2018: outcomes or three years of pan-European networking

11.45 **Anna-Bella Failloux (Institut Pasteur, France):** EU projects for the prevention of vector borne diseases

12.05 **Igor Pajovic (Univ. MNE, Montenegro):** Results of the LOVCEN project in Montenegro.

12.25 **Alessandro Albieri (CAA, Italy):** Preventing vectorial borne diseases throughout new tools supporting operational capacity.

12:45 Open discussion

**13:10-14:30 Break**

**14.30-15.30 Special event theatre with mosquitoes “Questione di Culex” Roberto Mercadini – Claudio Venturelli**

