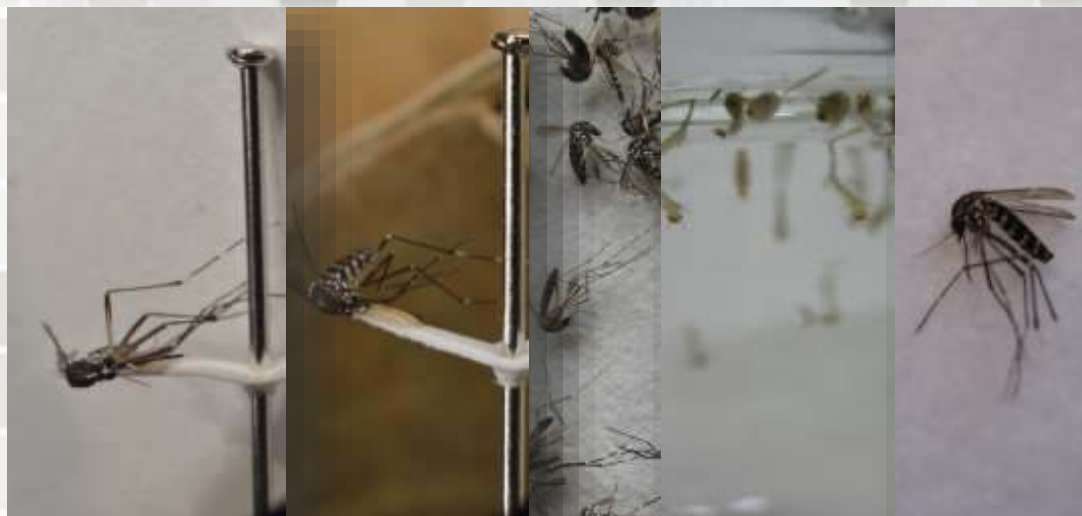


# Entomological surveillance in the points of entry. LIFE CONOPS data



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Department of Entomology &  
Agricultural Zoology  
Benaki Phytopathological Institute



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[www.bpi.gr](http://www.bpi.gr)

LIFE CONOPS (LIFE12 ENV/GR/000466)







LIFE CONOPS: Ανάπτυξη και επίδειξη διαχειριστικών σχεδίων ένταξης των ενισχυόμενων από την κλιματική αλλαγή χαρακτηριστικών κοινωσιών στην Νότια Ευρώπη

"Κώνωψ: Αρχαία Ελληνική λέξη για το κουνούπι, κν. κουνούπι, Λατινικά Culex. Έντομο με δύο πτέρυγες το θηλυκό του οποίου διαθέτει μακριά προβόσκιδα με την οποία έχει τη δυνατότητα να μιλξει αίμα".



LIFE CONOPS: "Development & demonstration of management plans against - the climate change enhanced - invasive mosquitoes in S. Europe"

"CONOPS (ko-no-ps) (Ancient Greek word for mosquito). Any of various two-winged insects, the female of which has a long proboscis for sucking blood. Many mosquito species are vectors of diseases. "



LIFE CONOPS: "Sviluppo e dimostrazione di piani di gestione contro le zanzare invasive - favorite dai cambiamenti climatici - in Sud Europa"

"CONOPS (ko-no-ps) Antica parola greca che significa zanzara. Qualunque insetto con due ali del quale la femmina ha una lunga proboscide per succhiare il sangue. Molte specie di zanzare sono vettori di malattie".



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Regione Emilia-Romagna



terro nova

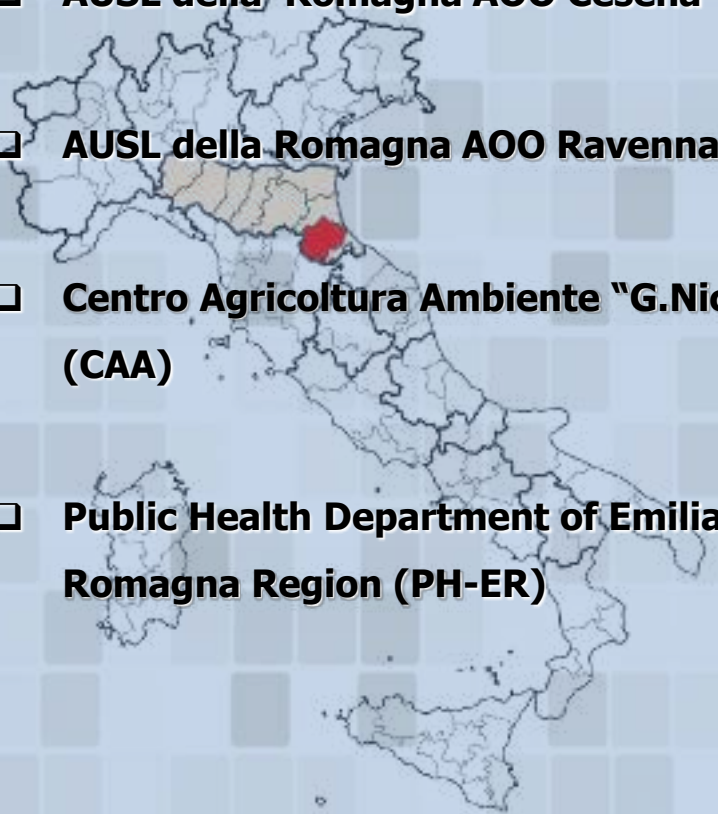
SERVIZIO SANITARIO REGIONALE  
EMILIA-ROMAGNA  
Servizio Sanitario Regionale della Regione

SERVIZIO SANITARIO REGIONALE  
EMILIA-ROMAGNA  
Servizio Sanitario Regionale della Regione





- ☐ AUSL della Romagna AOO Cesena
- ☐ AUSL della Romagna AOO Ravenna
- ☐ Centro Agricoltura Ambiente "G.Nicoli" (CAA)
- ☐ Public Health Department of Emilia-Romagna Region (PH-ER)



- ☐ Benaki Phytopathological Institute (BPI)
- ☐ Agricultural University of Athens (AUA)
- ☐ NCSR "DEMOKRITOS"
- ☐ ONEX SA
- ☐ TERRA NOVA Ltd
- ☐ Panteion University (UEHR)



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Regione Emilia Romagna



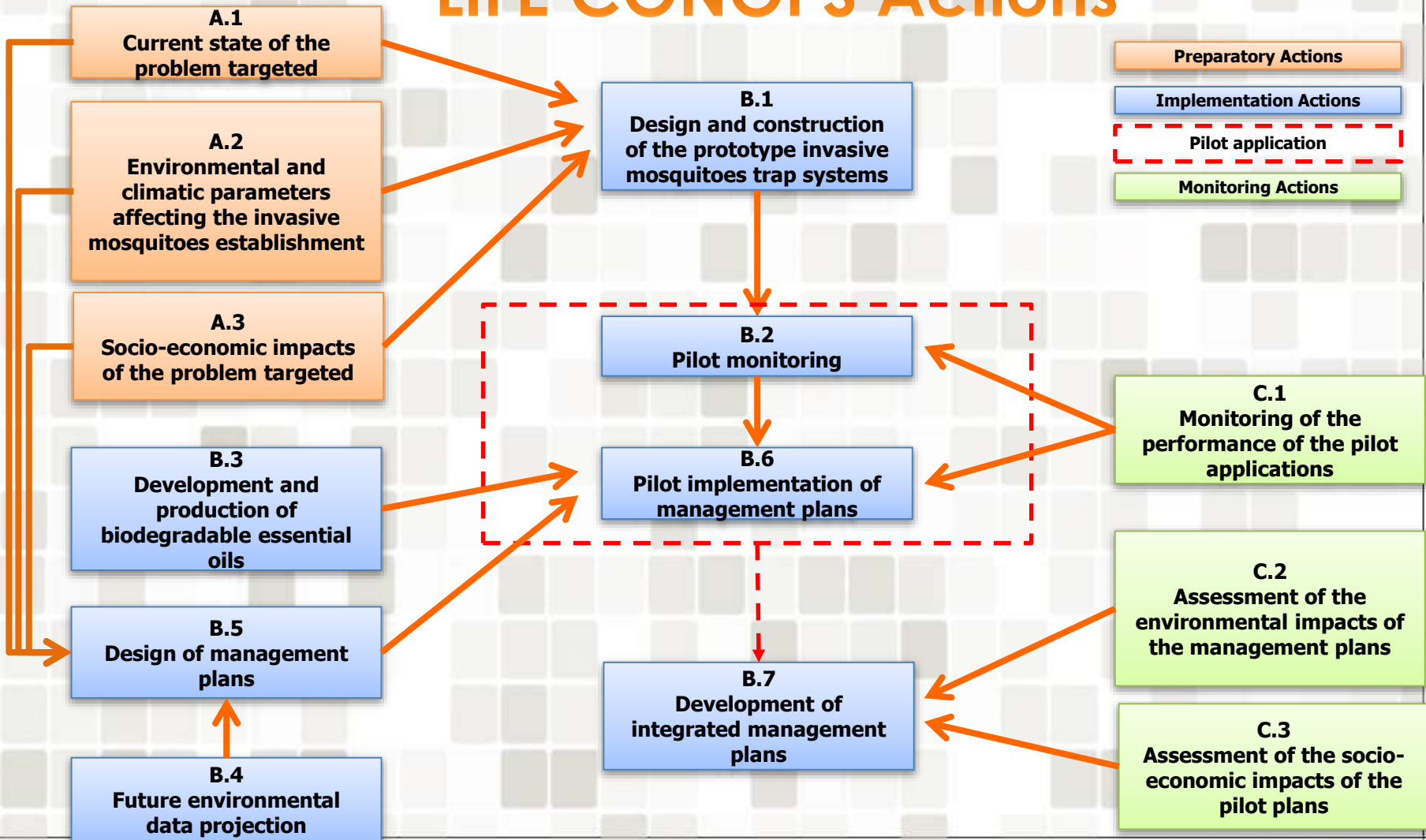
SERVIZIO SANITARIO REGIONALE  
EMILIA-ROMAGNA  
Azienda Unità Sanitaria Locale di Ravenna

SERVIZIO SANITARIO REGIONALE  
EMILIA-ROMAGNA  
Azienda Unità Sanitaria Locale di Cesena





# LIFE CONOPS Actions



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# The journey of *Aedes albopictus* (Asian Tiger Mosquito)

...which is considered capable to transmit more than 20 diseases

Eggs of *Aedes albopictus* are laid along the side of artificial or man-made containers and will hatch when water levels rise above the location of the egg, submerging it.



**1988-1995**

Exports from Japan to 137 other countries

**49.000.000**

Used tires



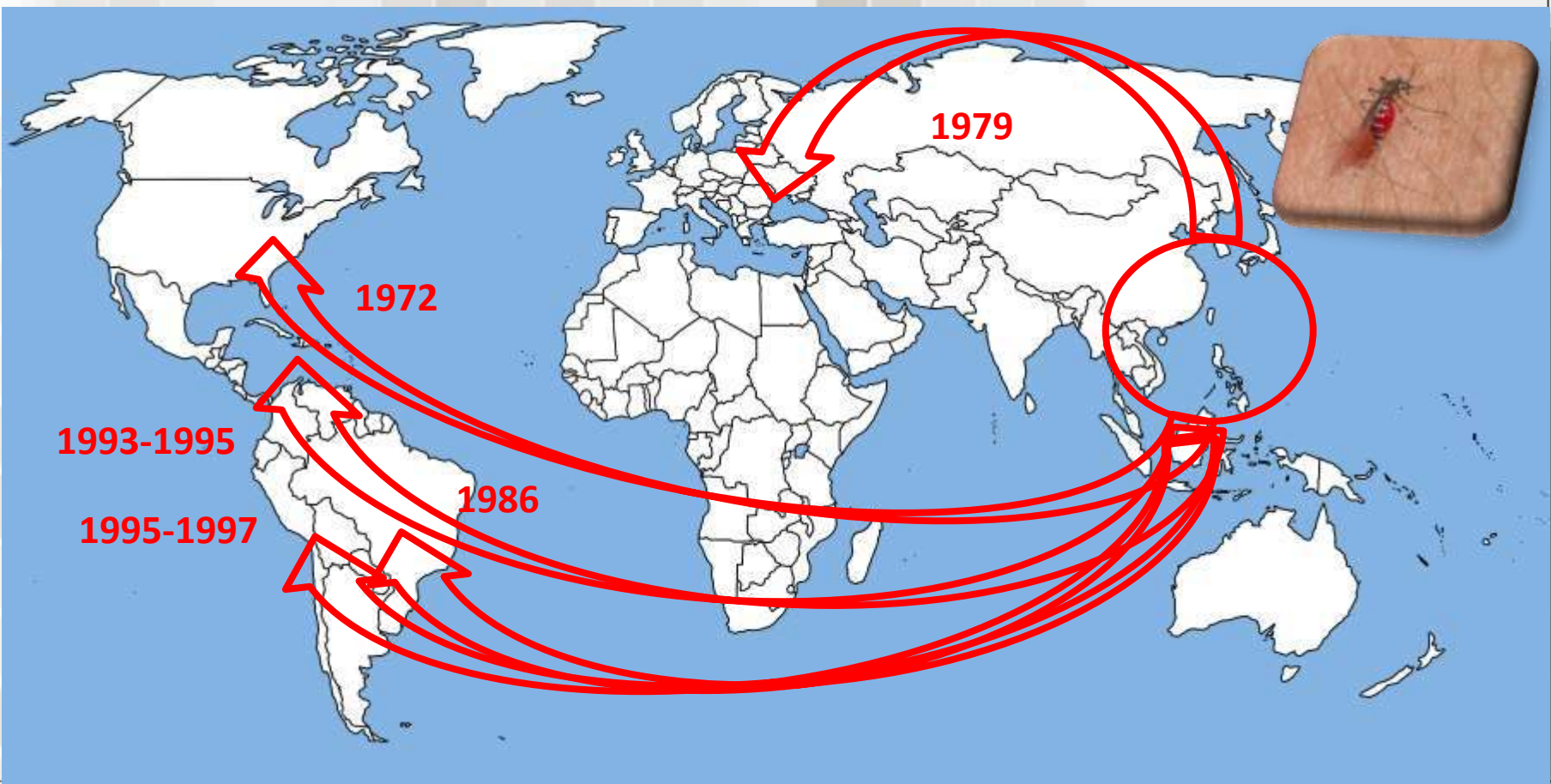
Lucky bamboo  
("lucky" not for us but for the mosquito)





# *Aedes albopictus*

## Travelling around the world in 15 years...

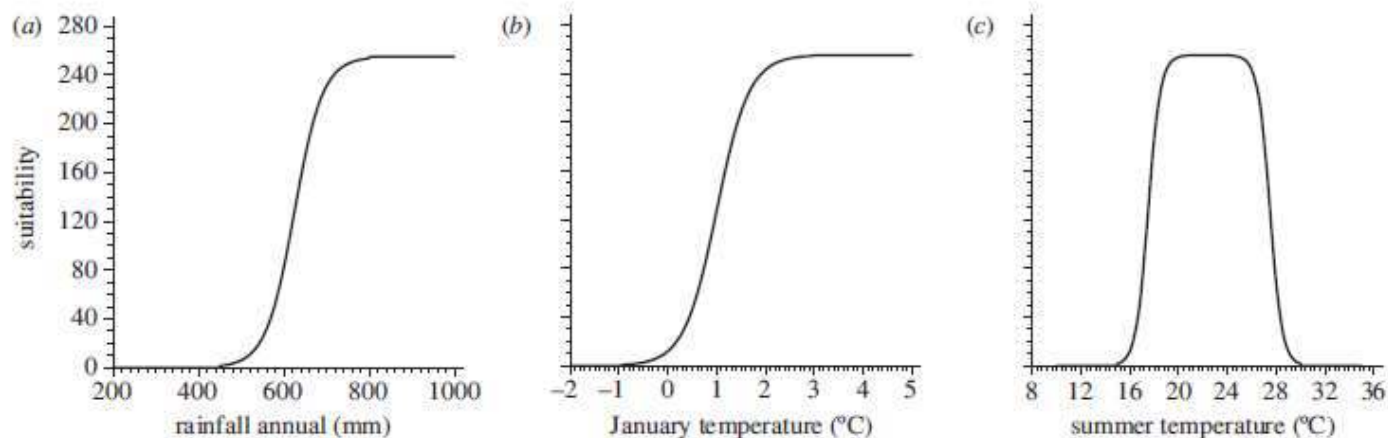


LIFE CONOPS (LIFE12 ENV/GR/000466)





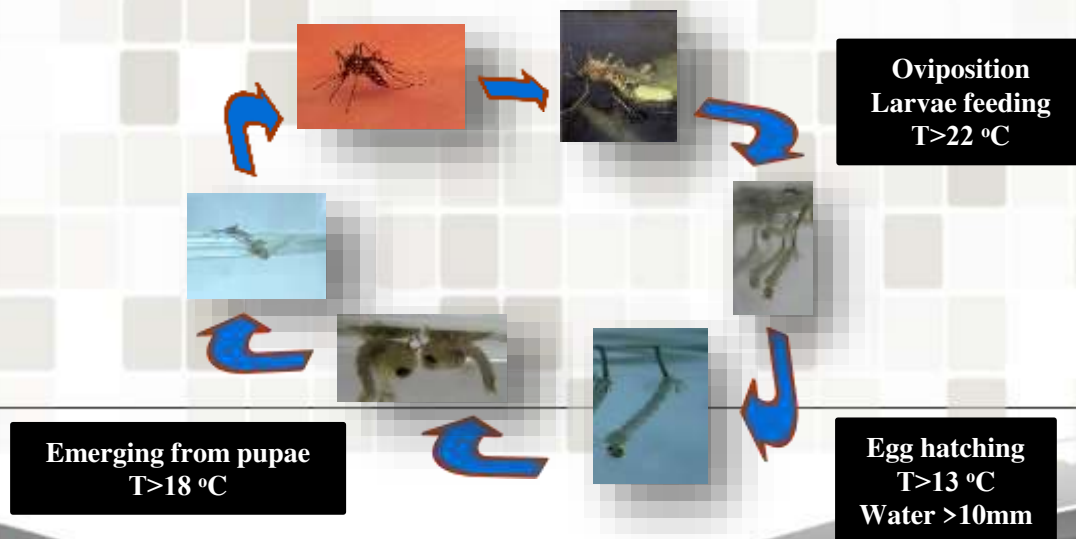
# Suitability parameters according to ECDC guidelines



**Annual Rainfall**

**Coldest Month  
(January)**

**Warm Period  
(March - October)**

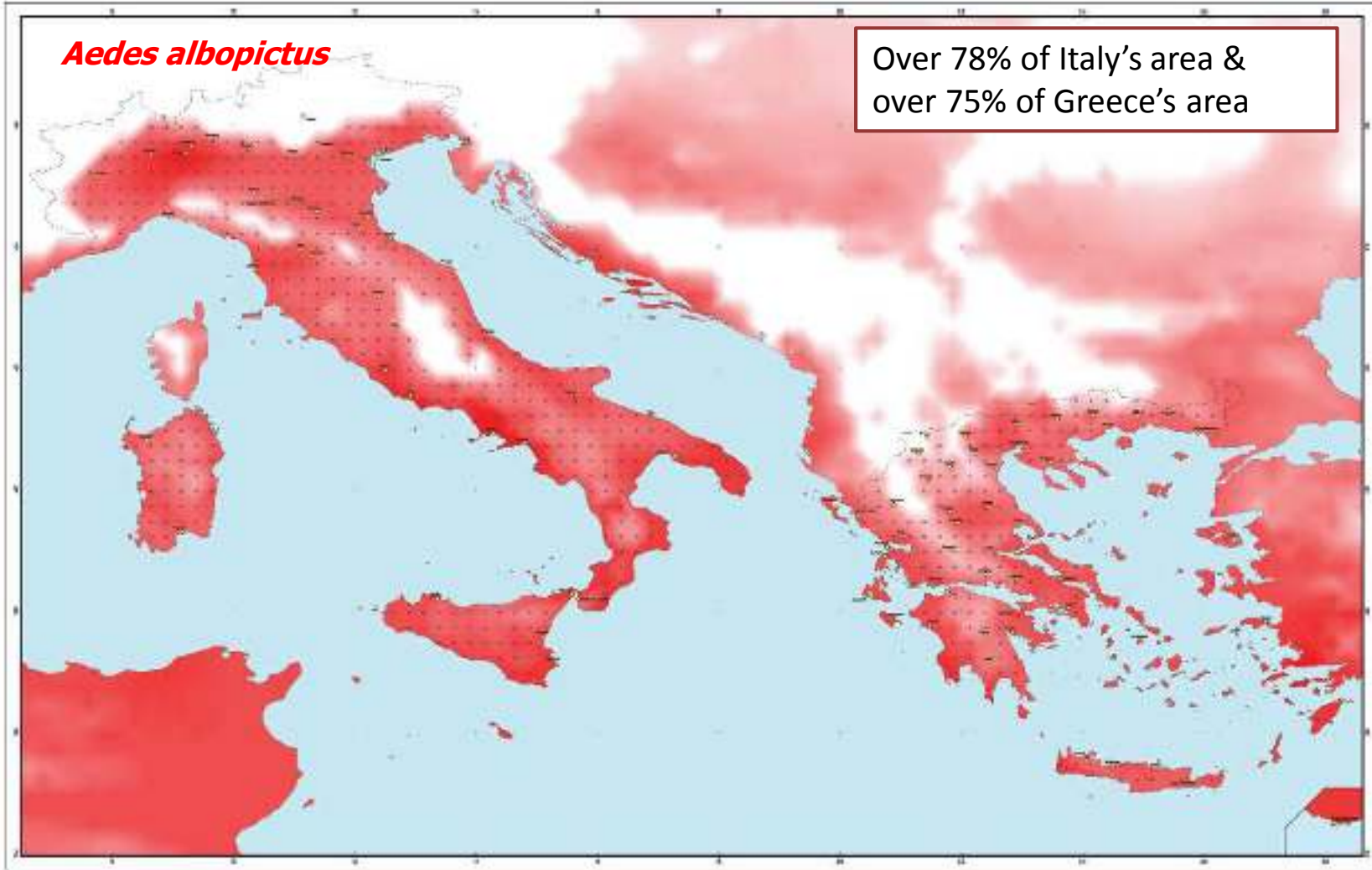




## How suitable are Greece and Italy now?

*Aedes albopictus*

Over 78% of Italy's area &  
over 75% of Greece's area



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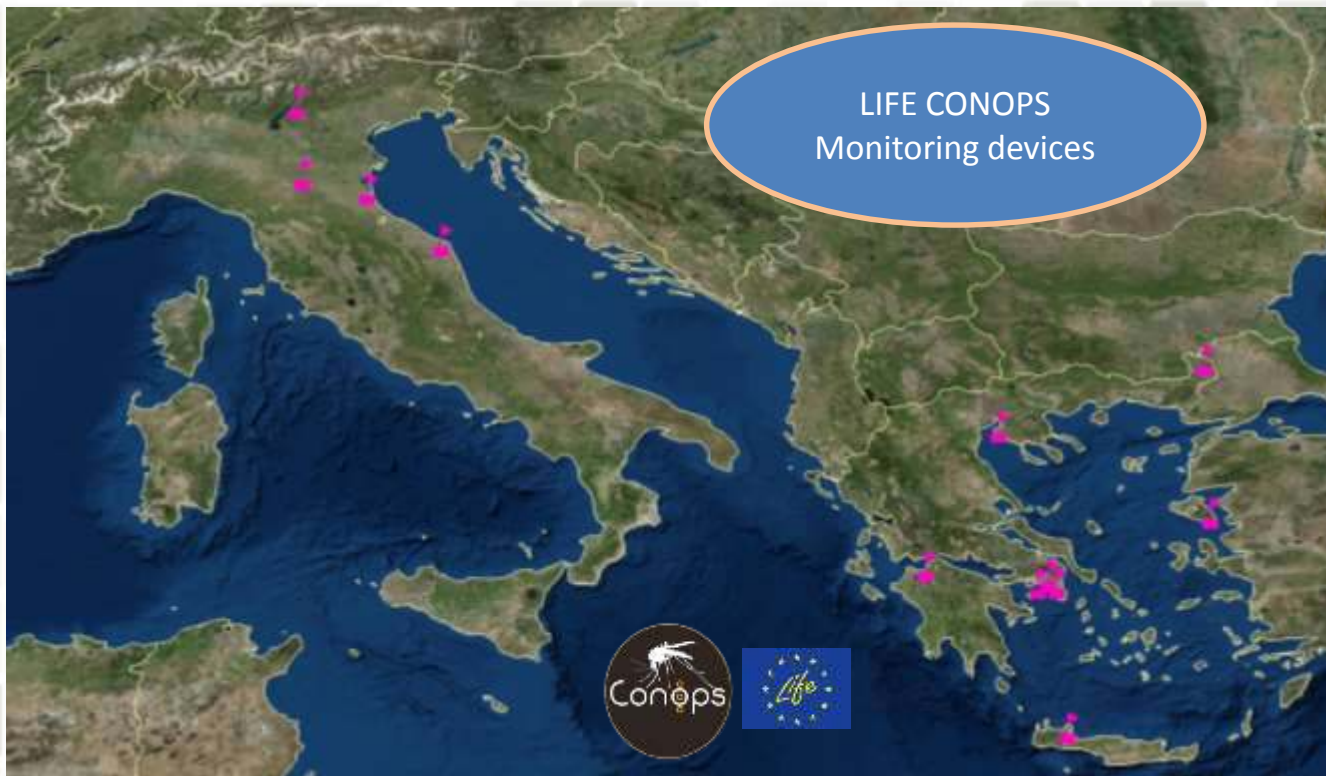
## Suitability difference for *Aedes aegypti* for the period 2014 - 2050



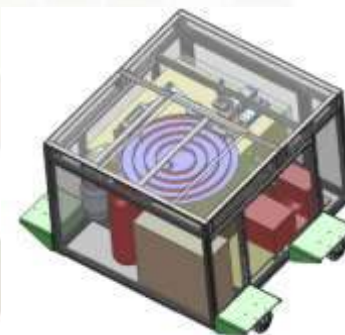
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Total number of  
Monitoring Devices: 12  
(Greece 8, Italy 4)



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LIFE CONOPS  
Ovitrap

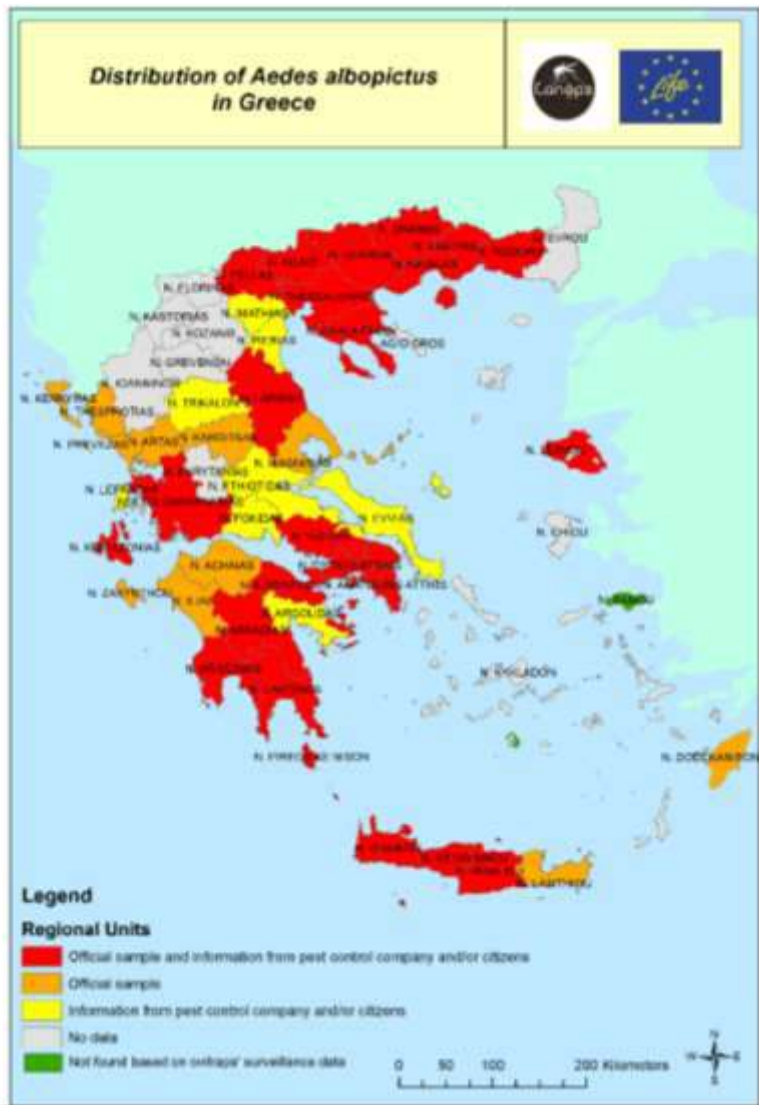


Total number of ovitraps: >150

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# Outbreak risk assessment for chikungunya and dengue 2 in Greece

LIFE CONOPS (LIFE12 ENV/GR/000466)

**Aim:** Vector competence of a Greek strain of *Aedes albopictus* for the mutated chikungunya virus (CHIKV E1A226V) and for the dengue 2 virus (DENV 2)

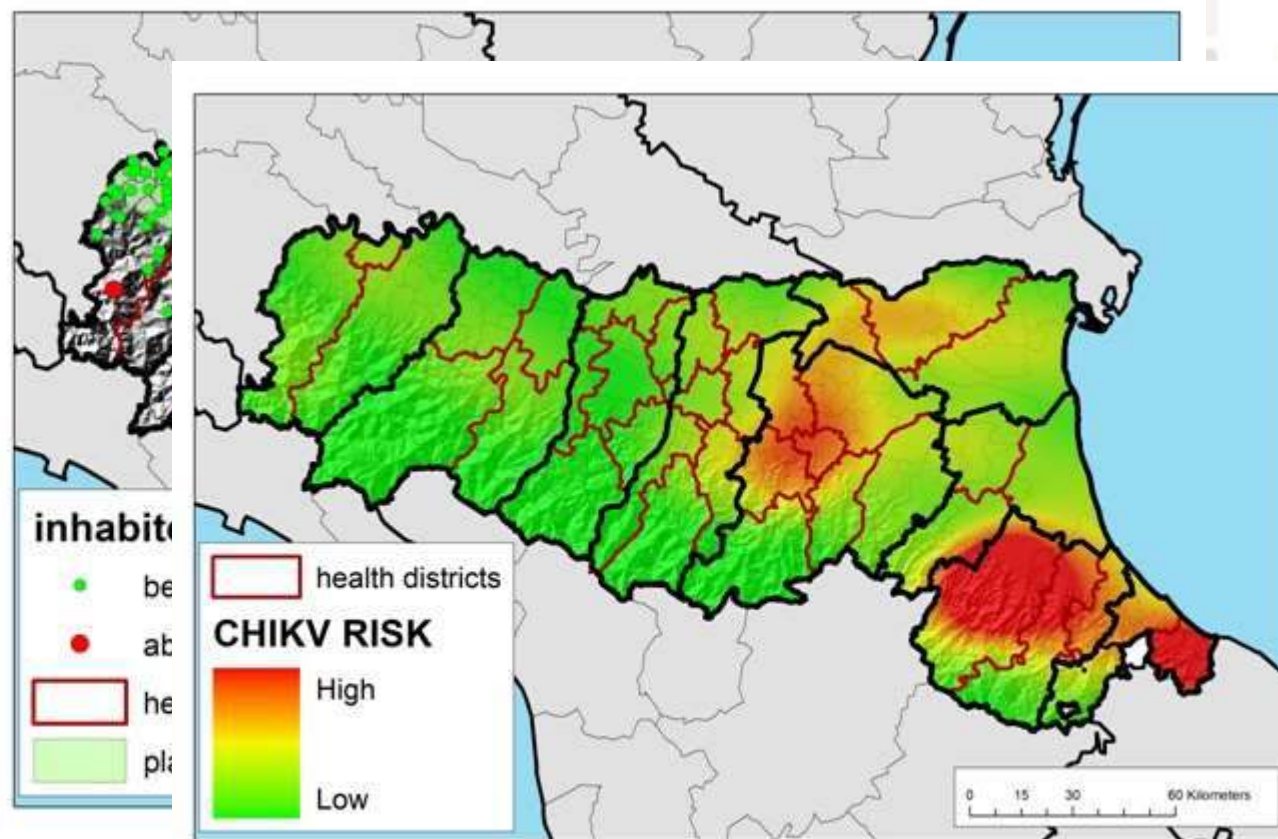
**Results:** Laboratory trials confirmed the vector competence of the Greek strain either for CHIKV E1A226V or for DENV 2. The rate of infection was similar to those ones measured for an *Ae. albopictus* strain collected in Camargue (France) and for an Italian strain collected in Romagna after the chikungunya outbreak occurred in 2007.

Bellini et al., Vector Biol J (2016)





# CLUSTER MAPS OF CHIKUNGUNYA VIRUS EPIDEMIOLOGICAL RISK IN EMILIA-ROMAGNA IN 2013



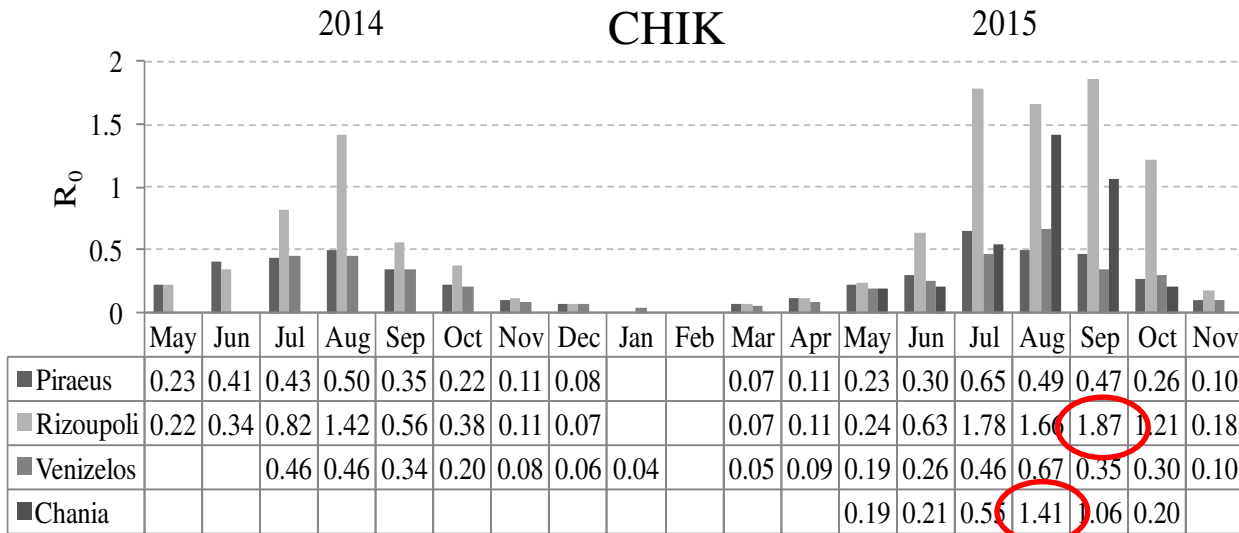
LIFE CONOPS (LIFE12 ENV/GR/000466)



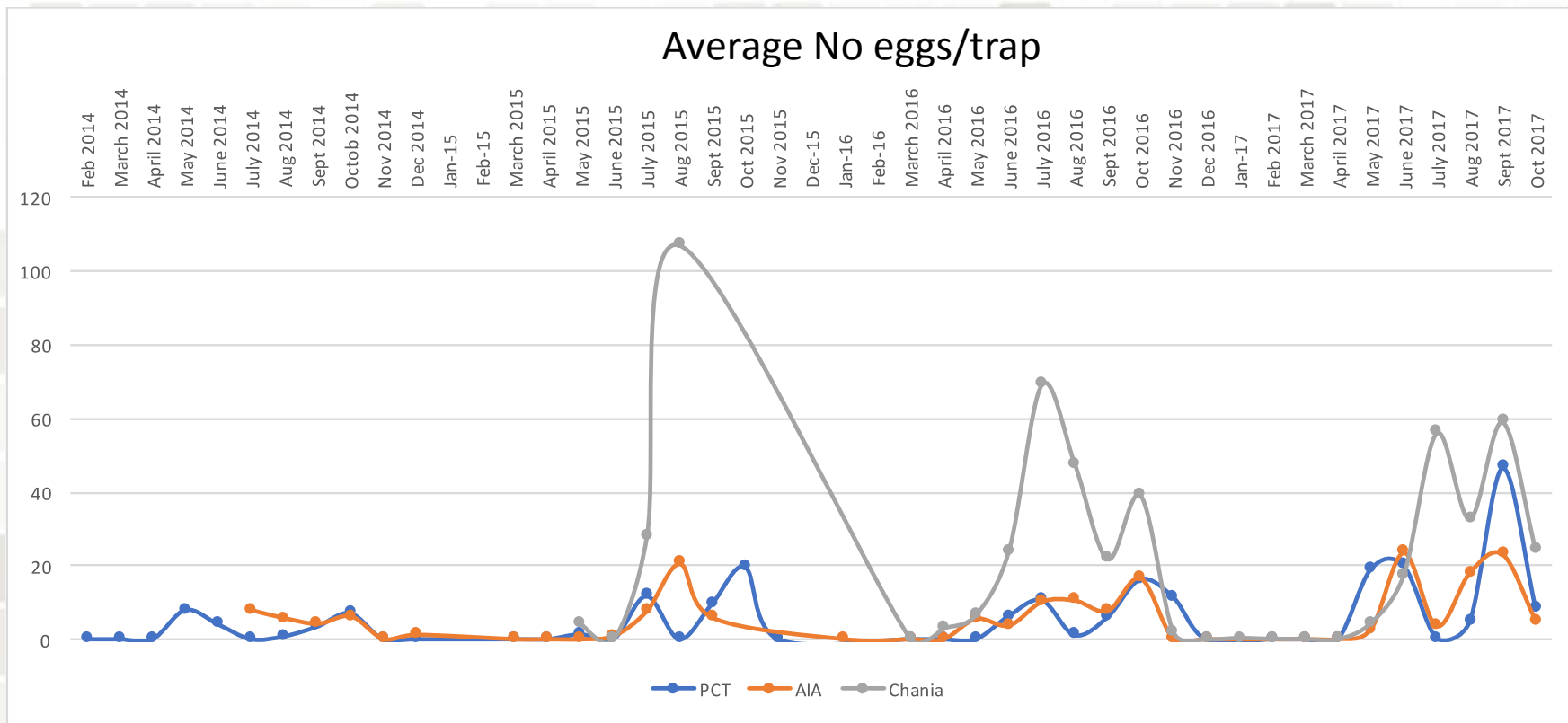


# Outbreak risk assessment for chikungunya and dengue 2 in Greece

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# LIFE CONOPS Management plans

## Actions of management plans:

- Standardized quantitative monitoring
- Public health risk assessment
- Community participation
- Standard control measures in public and private areas
- Emergence control measures
- Pilot door-to-door control measures in private areas
- Efficacy & Quality control methods
- Resistance prevention



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# LIFE CONOPS Management plans

## Multi-sectorial Committee for the Prevention and Management of Tropical Diseases (MoH)

- Response vector management plan for diseases transmitted by *Ae. albopictus* (2016)

Legally operated

INFORMATION DEVELOPMENT AGENCY  
ΕΠΙΧΕΙΡΗΣΙΑΚΟ ΠΡΟΓΡΑΜΜΑ  
ΕΥΡΩΠΑΪΚΗ ΕΝΩΣΗ  
ΑΔΑ: ΩΜ17465ΦΥΟ-Χ4Θ

ΑΝΑΡΤΗΤΕΟ ΣΤΟ ΔΙΑΔΙΚΤΥΟ

ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ  
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ΓΕΝΙΚΗ Δ/ΝΣΗ ΔΗΜΟΣΙΑΣ  
ΥΓΕΙΑΣ & ΥΠΗΡΕΣΙΩΝ ΥΓΕΙΑΣ  
Δ/ΝΣΗ ΔΗΜΟΣΙΑΣ ΥΓΕΙΑΣ  
ΤΜΗΜΑ Α'

Αθήνα, 2 /8/2016  
Αρ. Πρωτ. ΓΓα/Γ.Π.Λοιμ.58894

ΠΡΟΣ: Όπως Πίνακας Διανομής

Πληροφορίες: Φ. Τσαλίκoglou  
Ταχ. Διεύθυνση: Αριστοτέλους 19  
Ταχ. Κώδικας: 101 87  
Τηλέφωνο: 213161324  
FAX: 210 5237684

ΕΓΚΥΚΛΙΟΣ

ΘΕΜΑ: «Σχέδιο διαχείρισης των διαβιβάσεων σε περίπτωση κρούσματος Δάγκειου πορετού, λοίμωξης από ιό Chikungunya ή Zika»

Έχει:

1. Το Π.Δ.106/2014 (Φ.Ε.Κ. 173 Α', 28-8-2014) Οργανισμός του Υπουργείου Υγείας, όπως ισχύει.
2. Το πρακτικό της από 1-7-2016 13ης Συνεδρίασης της Επιτροπής για την Πρόληψη και Αντιμετώπιση Τροπικών Νοσημάτων.

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# LIFE CONOPS Management plans

TECHNICAL REPORT

Vector control with a focus on *Aedes aegypti* and *Aedes albopictus* mosquitoes – literature review

## Executive summary

### Background

The global movement of goods and people, and climate change have contributed to the spread of the 'invasive' mosquitoes *Aedes aegypti* and *Aedes albopictus* into Europe. Rather than simply being a nuisance the presence of these mosquitoes represents a major risk to public health. This literature review collects, summarises and analyses current international, national and sub-national technical documents, guidance and recommendations on control methods against invasive mosquitoes.



TECHNICAL REPORT

Vector control with a focus  
on *Aedes aegypti* and *Aedes  
albopictus* mosquitoes

Literature review and analysis

[www.ecdc.europa.eu](http://www.ecdc.europa.eu)

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# LIFE CONOPS Management plans





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





# Videos



**Views more than 32.800**

**A 39'' social message video**

(approved by the Greek National Council for Radio and Television)



**Views more than 39.200**

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**Joint FAO/IAEA Programme**  
Nuclear Techniques in Food and Agriculture



UNIVERSITY OF  
THESSALY



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**VectorNet**

European network for sharing data  
on geographic distribution of arthropod vectors,  
transmitting human and animal disease agents



ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ  
Υπουργείο Αγροτικής Ανάπτυξης  
και Τροφίμων



ΠΕΡΙΦΕΡΕΙΑ ΔΥΤΙΚΗΣ ΕΛΛΑΔΑΣ  
*greek arrivals!*



ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ  
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REGION OF CRETE



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DISEASE CONTROL & PREVENTION  
MINISTRY OF HEALTH



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Angeliki Petraki



Dr Evangelos  
Badieritakis



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ΑΘΗΝΩΝ



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