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

General introduction to the LIFE CONOPS project

BENAKI PHYTOPATHOLOGICAL INSTITUTE

Dr. A. Michaelakis, Project Coordinator

Benaki Phytopathological Institute

ΜΠΕΝΑΚΕΙΟ ΦΥΤΟΠΑΘΟΛΟΓΙΚΟ ΙΝΣΤΙΤΟΥΤΟ

ΔΗΜΟΚΡΙΤΟΣ ΕΘΝΙΚΟ ΚΕΝΤΡΟ ΕΡΕΥΝΑΣ ΦΥΣΙΚΩΝ ΕΠΙΣΤΗΜΩΝ

ΓΕΩΠΟΝΙΚΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΑΘΗΝΩΝ

Regione Emilia-Romagna

SERVIZIO SANITARIO REGIONALE EMILIA-ROMAGNA
Azienda Unità Sanitaria Locale della Romagna

ONEX

terra nova

CENTRO agricoltura ambiente "Giorgio Nicoli"

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The problem

Alexander Skochkov "Old Mosquito" 2014

Mosquitoes: Disturbance or……

Disturbance

- Affecting the quality of life
- Significant economic impact
- Impact on tourism

Disease transmission

- Malaria
- West Nile Virus
- Dengue fever
- Yellow fever
- Chikungunya

Vector-borne diseases (VBD)

To happen there must be three conditions:

- **Presence and abundance of the vector**

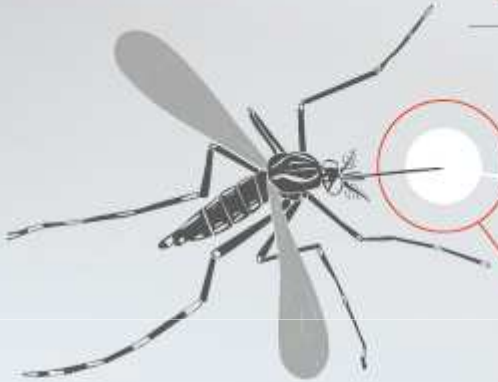
- **Presence of virus/parasite**

- **The viruses/parasites are spread to people through the bites**

European Centre for Disease Prevention and Control

An emerging threat

Mosquito-borne diseases in Europe



Mosquitoes can carry infectious diseases from person to person and from place to place.

Tropical mosquito-borne diseases are originally prevalent in tropical and subtropical regions. Some are especially endemic in regions of Africa, Asia, and the Americas and cause substantial illness for more than one billion people globally.

An emerging (or re-emerging) infectious disease is often a disease already known but spreading to new geographic areas, new populations, or reappearing after having been eradicated.

Vector-borne diseases

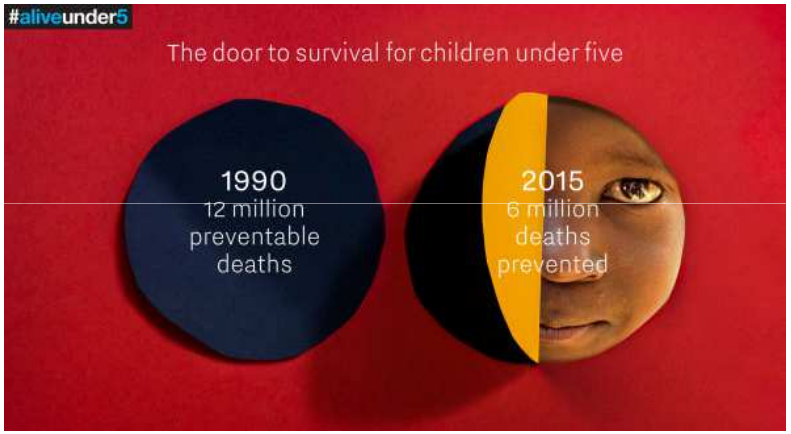
Fact sheet N°387
March 2014

World Health Organization

Key facts

- **Vector-borne diseases** account for **more than 17%** of all infectious diseases, causing more than **1 million deaths annually**.
- More than **2.5 billion people** in over **100 countries** are **at risk** of contracting **dengue** alone.
- **Malaria** causes more than **600 000 deaths** every year globally, most of them children under 5 years of age.
- **Other diseases** such as Chagas disease, leishmaniasis and schistosomiasis **affect hundreds of millions of people** worldwide.
- Many of these diseases are **preventable** through **informed protective measures.**

BILL & MELINDA GATES foundation



Life

Conops

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Zika

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

Duration: 01.07.2013 until ~~31.12.2017~~ 30.11.2018

Budget:

Total: 2,989,314 €

EU Contribution: 1,480,656 €

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- 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
- NCSR Demokritos
- ONEX SA
- TERRA NOVA Ltd
- Panteion University (UEHR)

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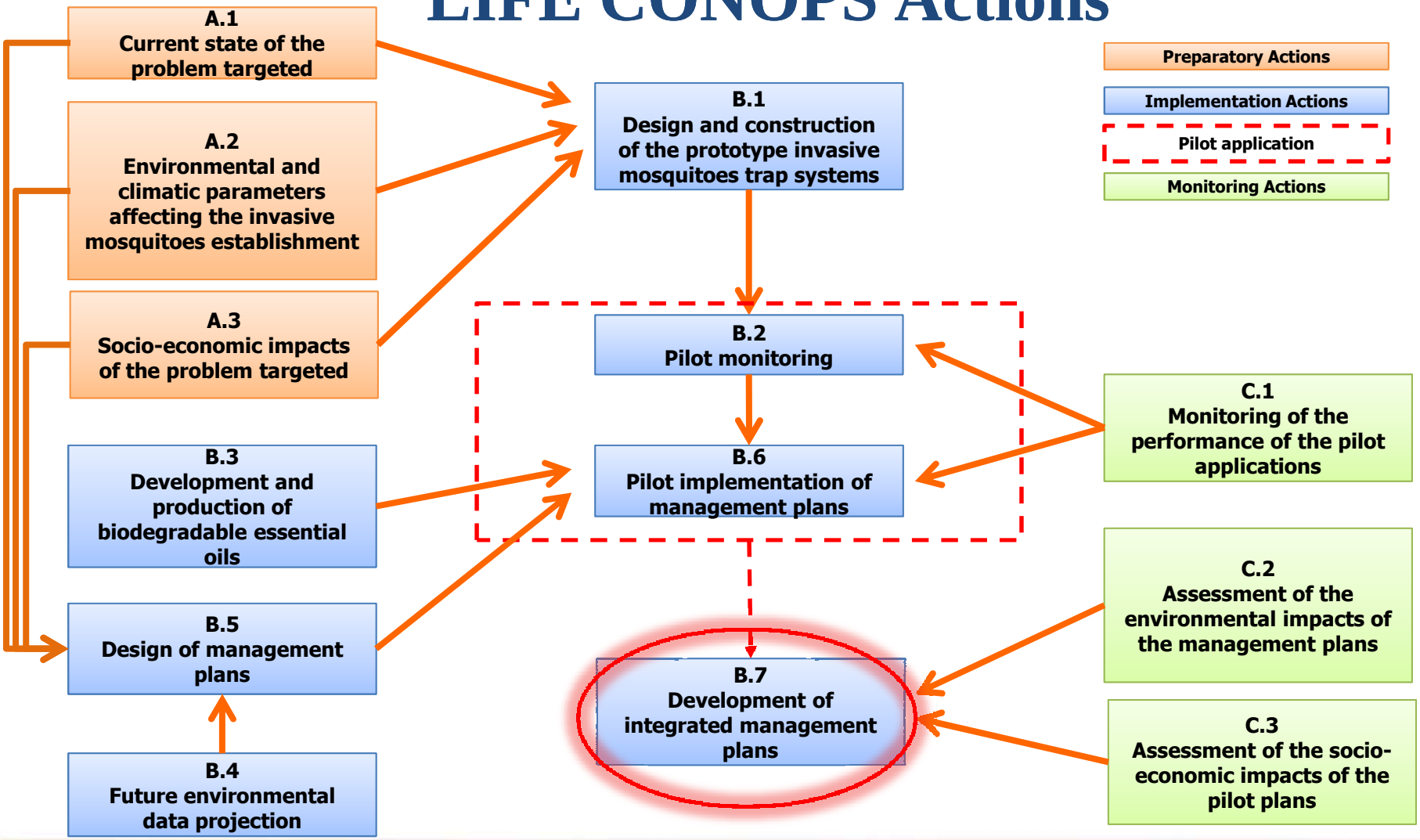
LIFE CONOPS Actions



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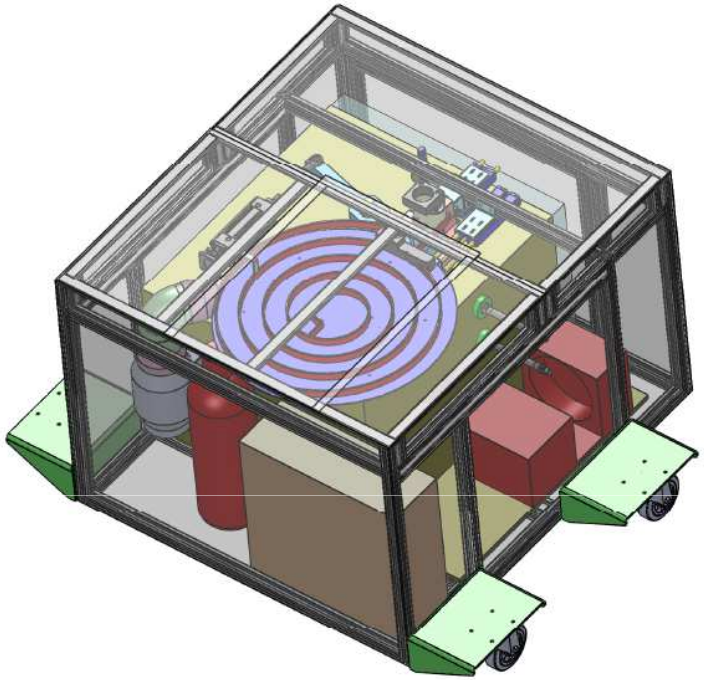
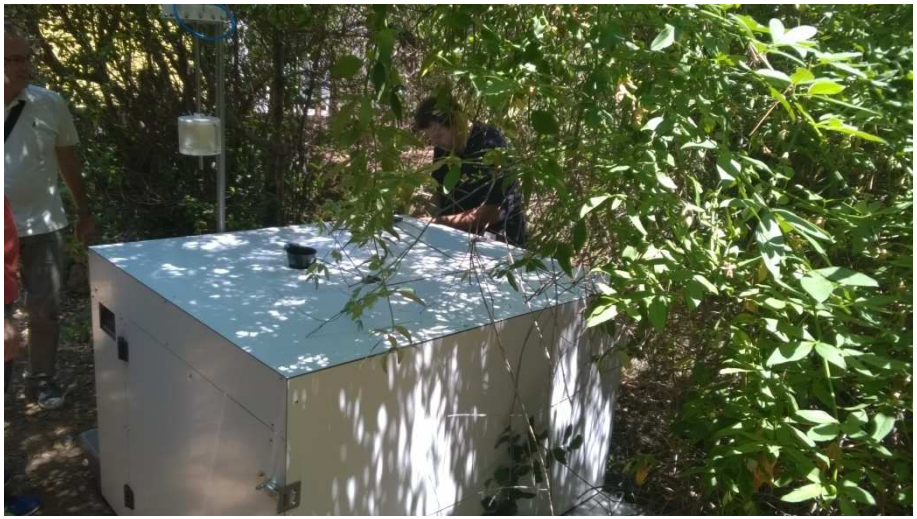
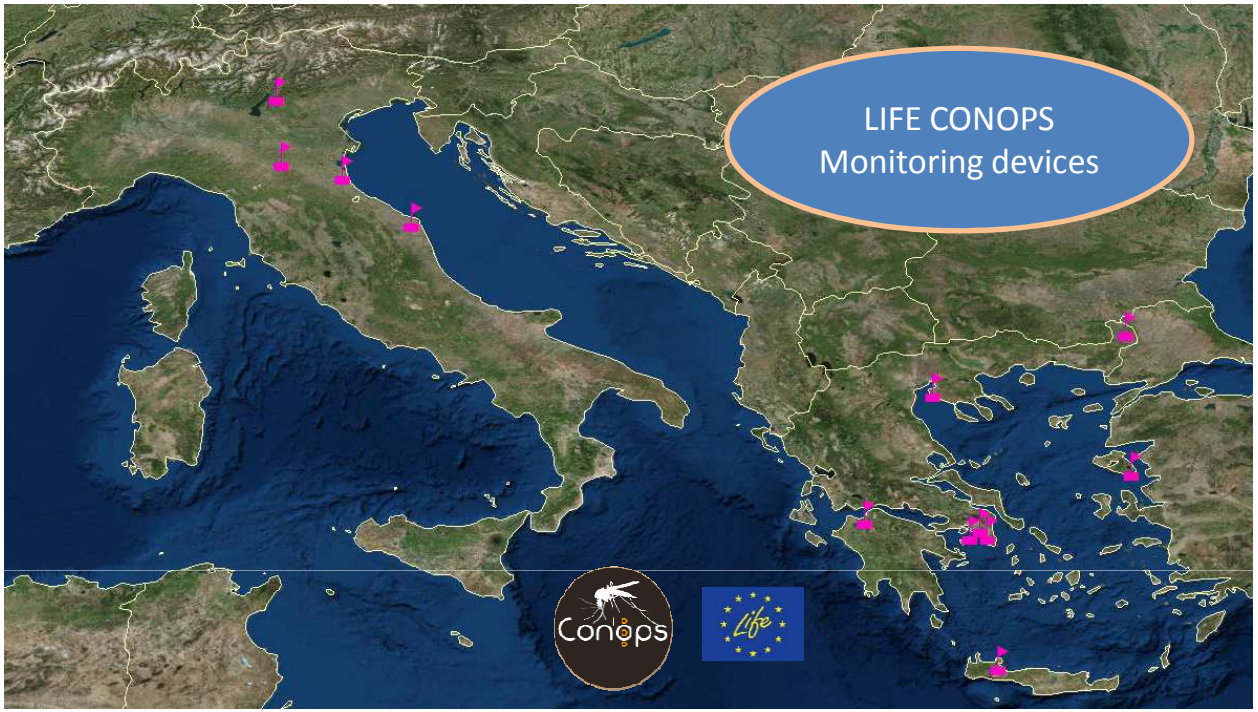
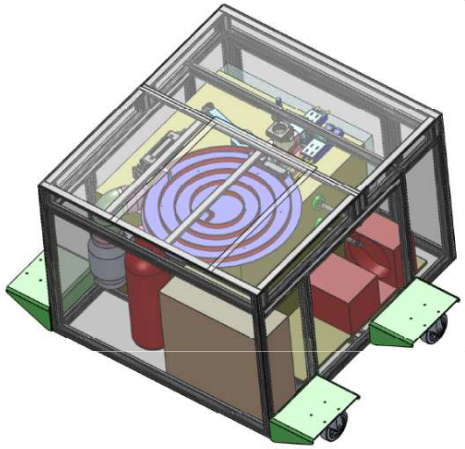
Prototype Monitoring Device





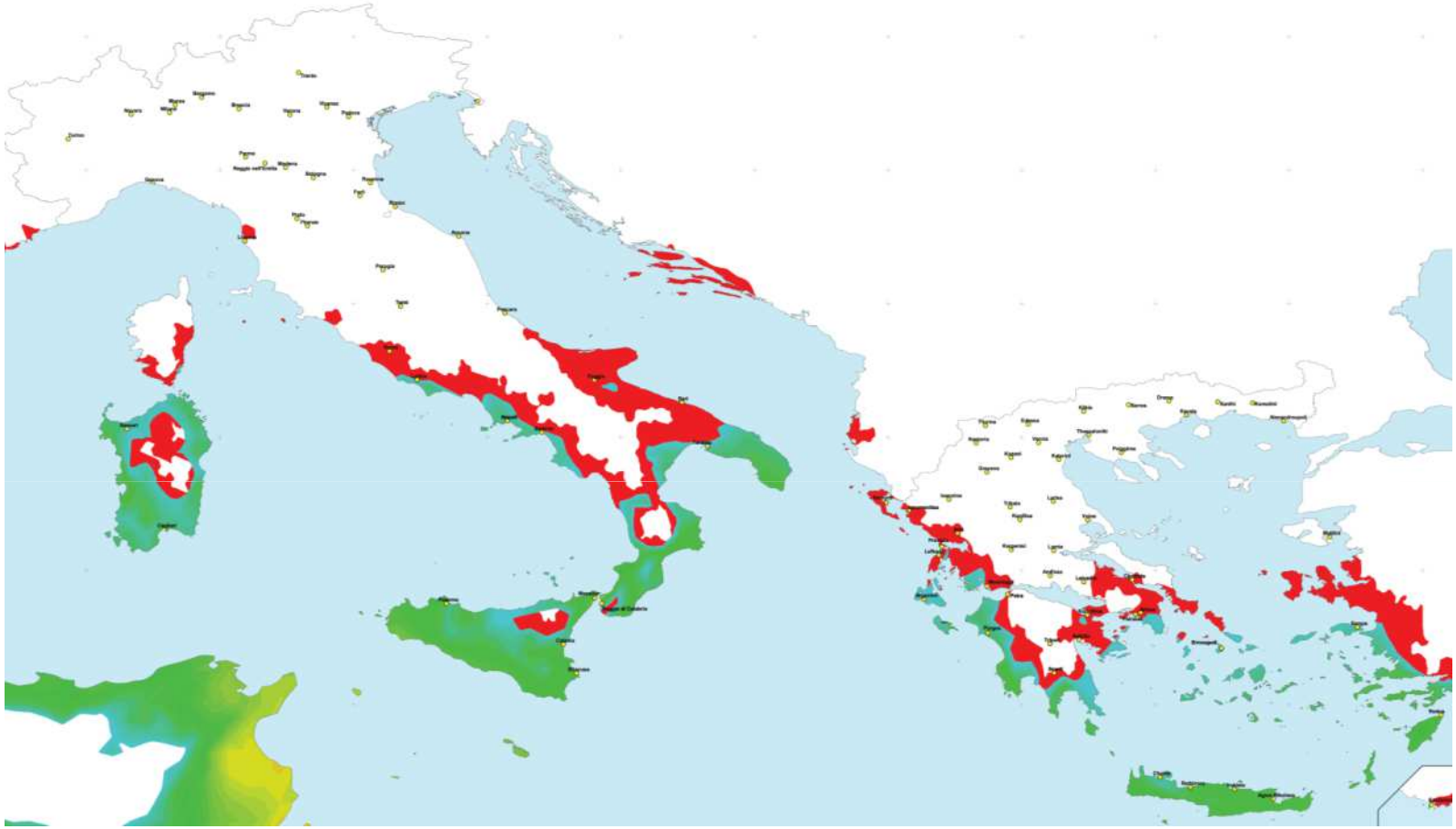


Number of Monitoring devices: 12 (GR 8, IT 4)



Oviposition traps: >150

Suitability maps for *Aedes aegypti*



Bio-pesticides: Development and production of biodegradable essential oils

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Bio-pesticides: Development and production of biodegradable essential oils

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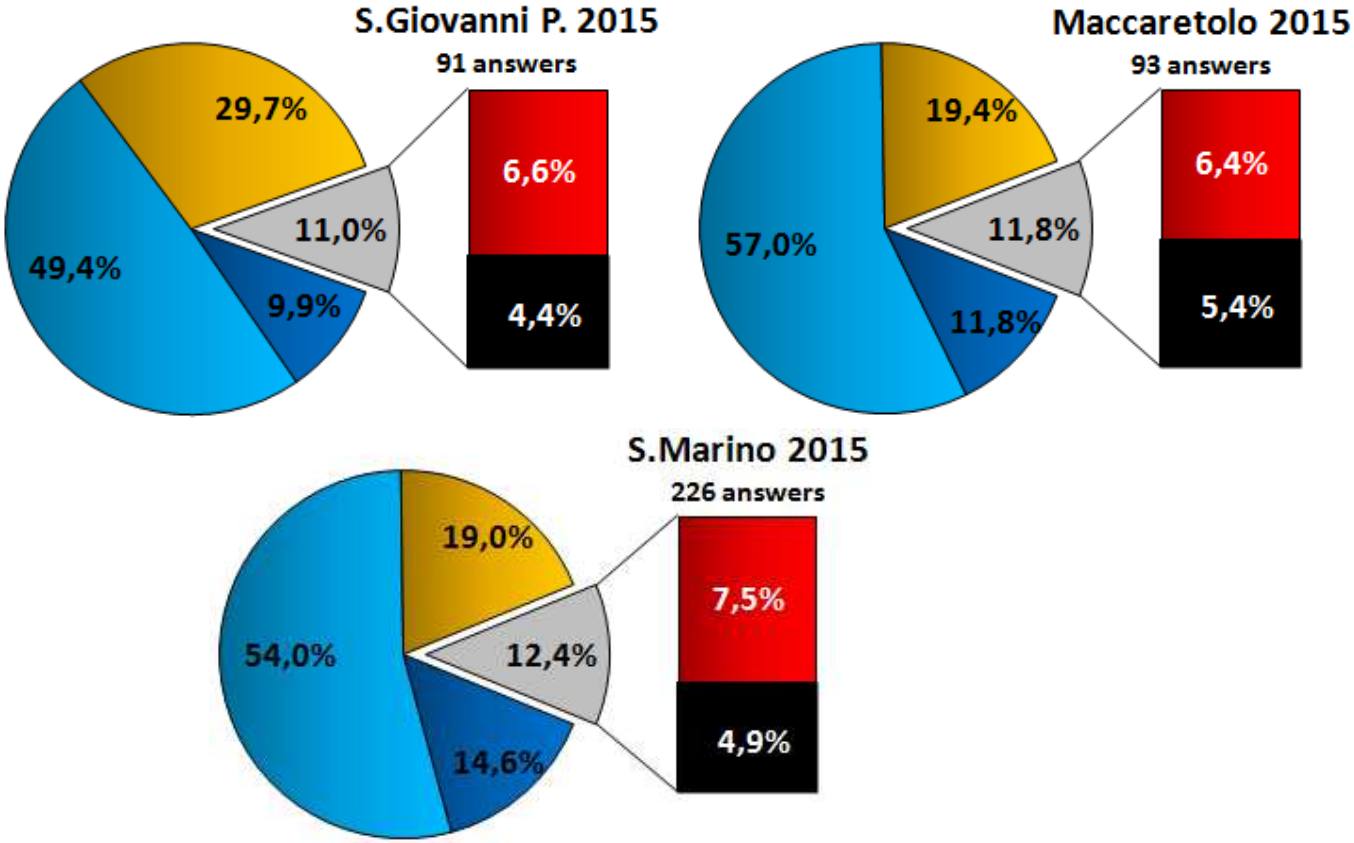
The “door-to-door” strategy against *Aedes albopictus* in Emilia-Romagna
EFFICACY EVALUATION BY SOCIAL POOLS

How was the efficacy?

- very effective
- effective
- not entirely effective
- little effective
- ineffective



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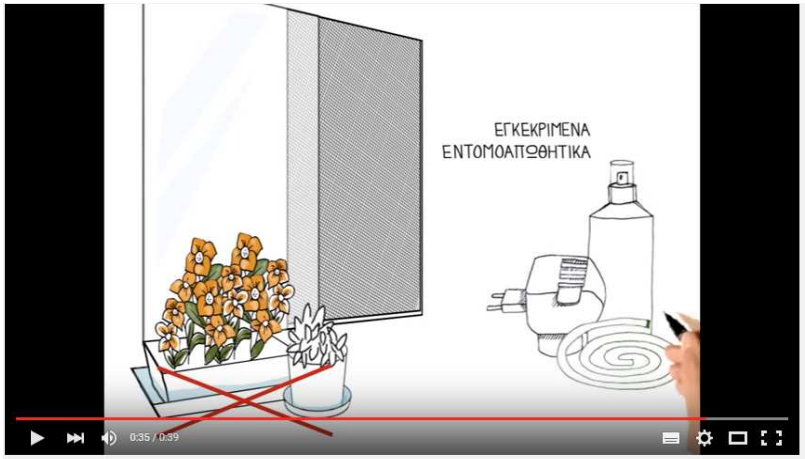
Cost analysis for the impact of IMS

Επιλογές πολιτικής καταπολέμησης των κουνουπιών	**Πρόγραμμα Α**	**Πρόγραμμα Β**	**Υφιστάμενη κατάσταση**
Μείωση κινδύνου σοβαρών κρουσμάτων ασθενείας εξαιτίας του Ιού του Δυτικού Νείλου	Μέγιστος κίνδυνος	Μηδενικός κίνδυνος	Δεν επιλέγω **κανένα** από τα δύο προτεινόμενα συμπληρωματικά προγράμματα καταπολέμησης των κουνουπιών
Λήψη έξτρα μέτρων προστασίας για τις ασθένειες του Τίγρη	ΝΑΙ	ΟΧΙ	
Βελτίωση του δείκτη όχλησης κατά τη διάρκεια της ημέρας	Μικρή βελτίωση	Μεγάλη βελτίωση	Η καταπολέμηση των κουνουπιών θα συνεχίζει να εφαρμόζεται **όπως εφαρμόζεται μέχρι σήμερα**
Βελτίωση του δείκτη όχλησης κατά τη διάρκεια της νύχτας	Μεγάλη βελτίωση	Καμία βελτίωση	
Αύξηση των δημοτικών εισφορών ανά νοικοκυριό (ανά δίμηνο)	10€	15€	0 €
Επιλογή	☐	☐	☐

Public awareness



Όσα πρέπει να ξέρουμε για τα κουνούπια | LIFE Conops

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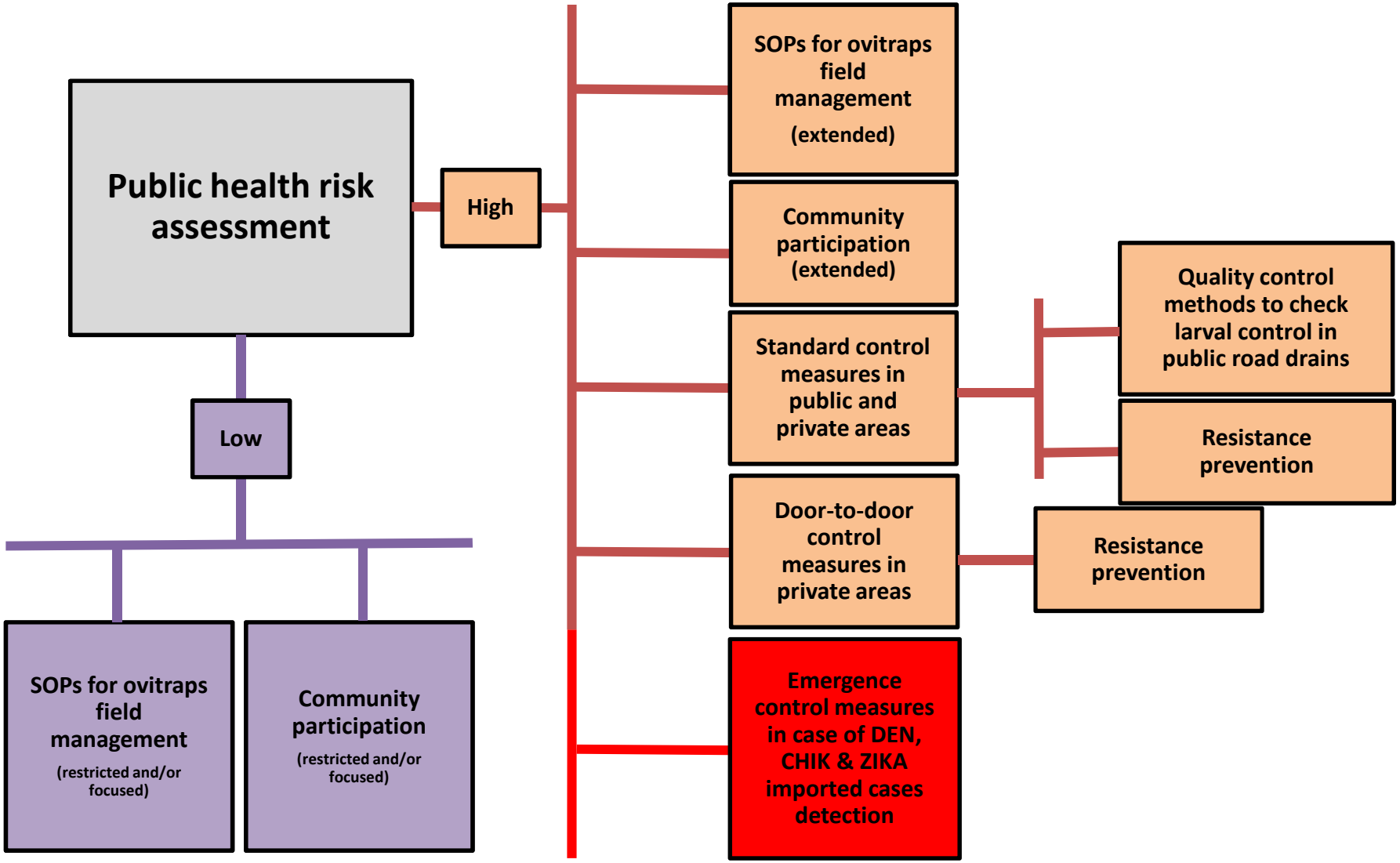

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LIFE CONOPS:
Management Plan to control *Aedes albopictus*

Mosquito weather forecast

- In collaboration with the National Observatory of Athens www.meteo.gr

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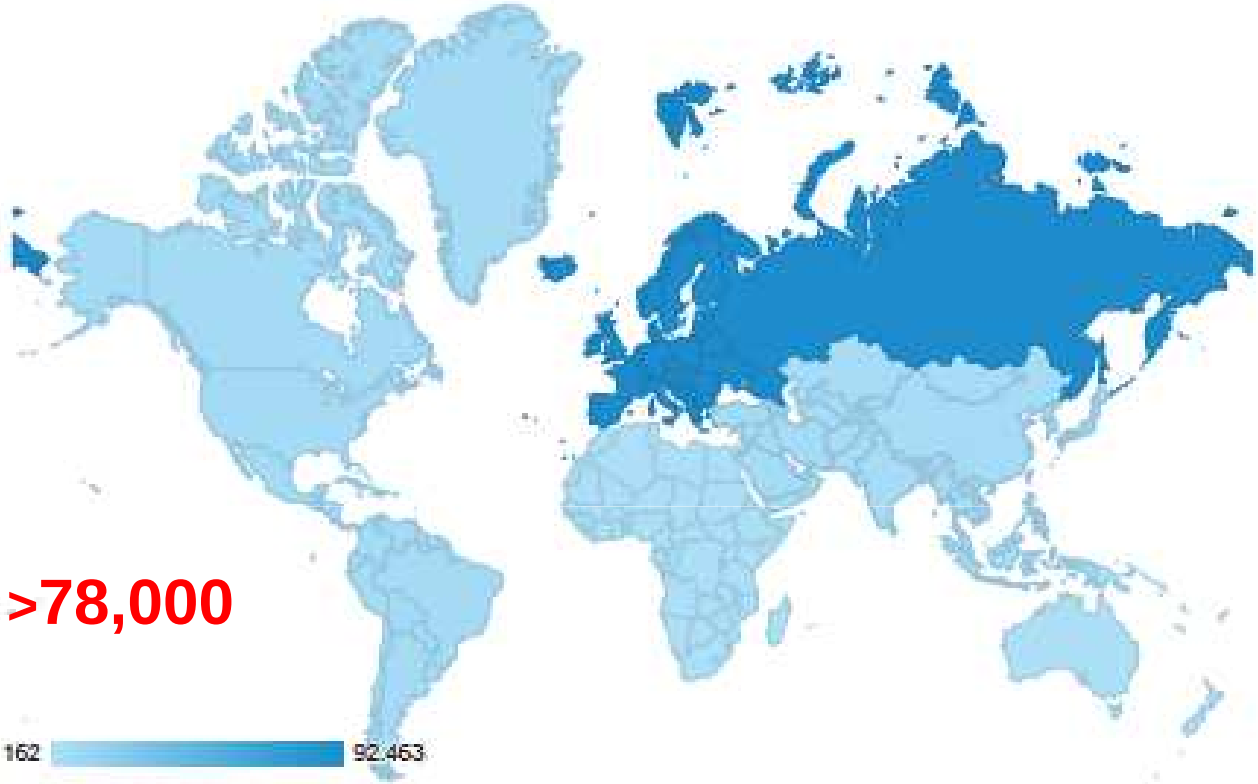
Videos

Views more than 32.000

Views more than 39.000

A 39” social message video
(approved by the Greek National Council for Radio and Television)

www.conops.gr A global EU project….



visits >78,000

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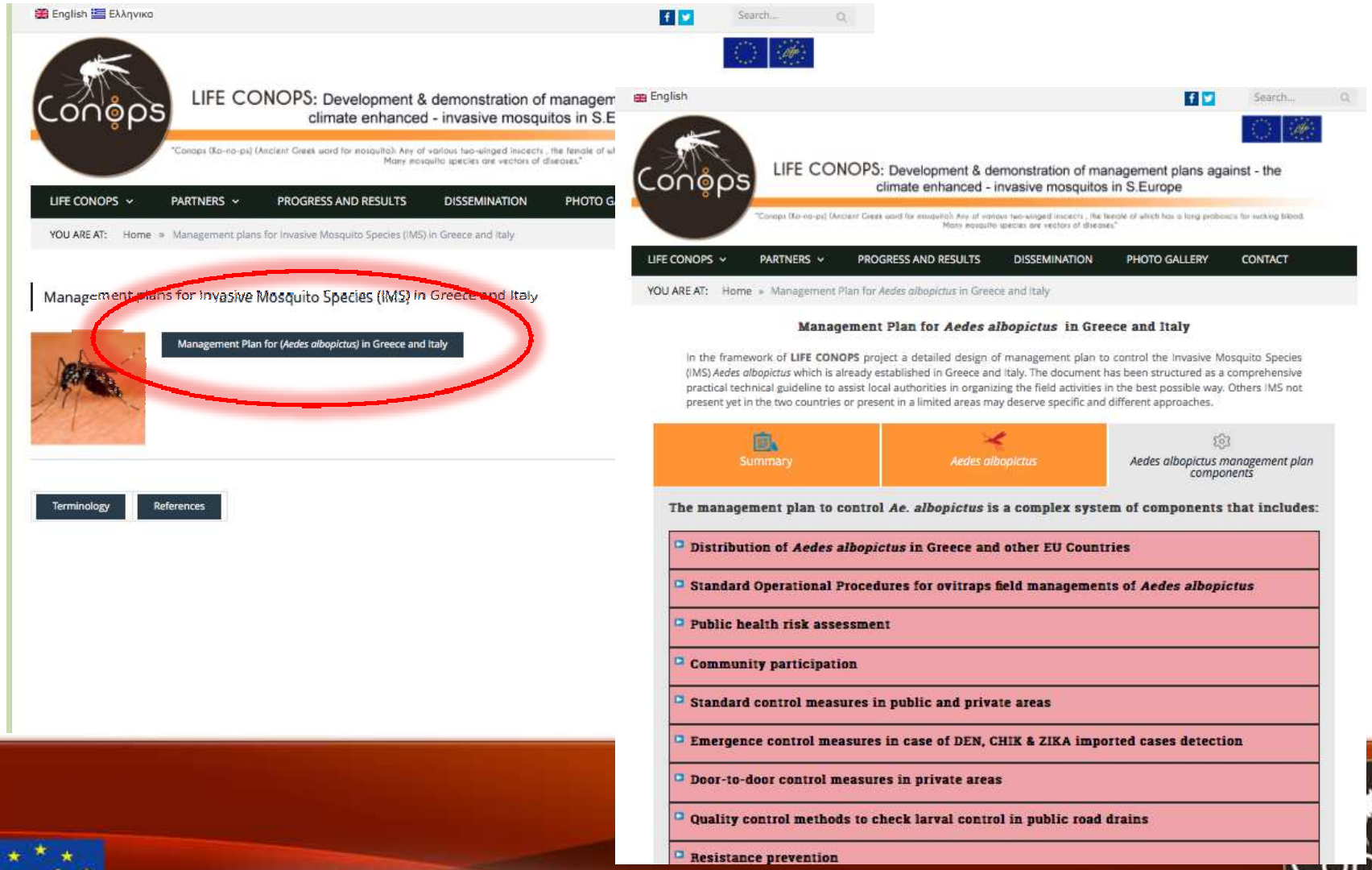
LIFE CONOPS:
Management Plan to control *Aedes albopictus*



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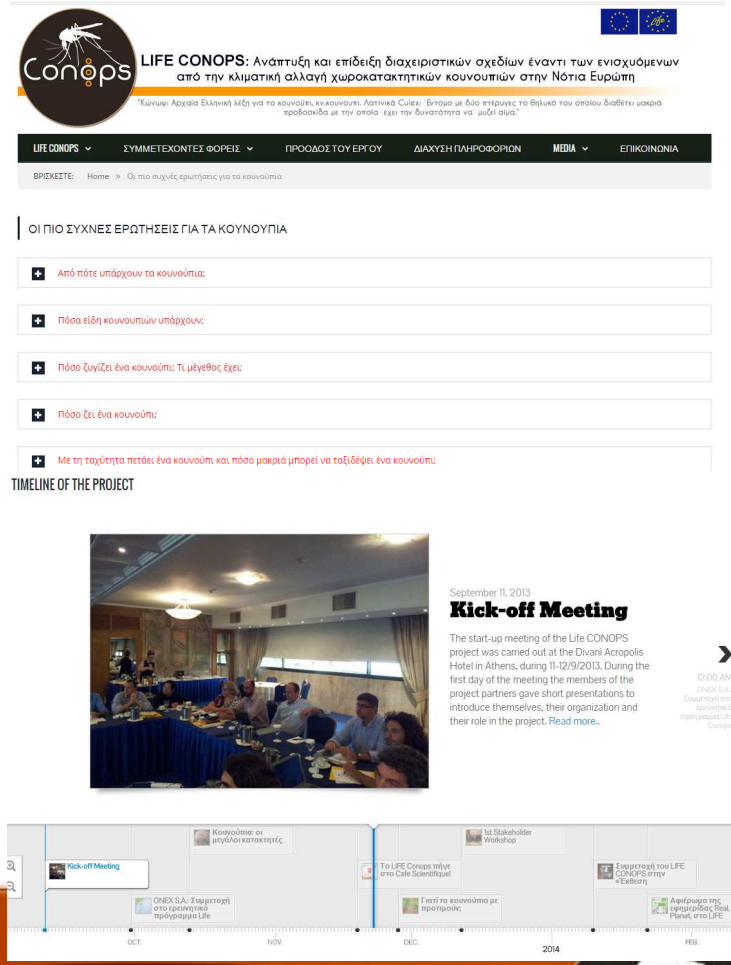
www.conops.gr



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Thank you
for your attention