

# AIM

*Aedes Invasive Mosquitoes*



# cost



Funded by the Horizon 2020 Framework Programme  
of the European Union

October 2018 – September 2022

***Aedes albopictus***



***Aedes koreicus***



***Aedes japonicus***



***Aedes aegypti***



[www.aedescost.eu](http://www.aedescost.eu)

**Francis Schaffner, Filiz Gunay, Antonios Michaelakis, Andrei D. Mihalca,  
Dušan Petrić, João Pinto, Willy Wint & Alessandra della Torre**



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**COST aims to enable break-through scientific developments leading to new concepts and products and thereby contributes to strengthen Europe's research and innovation capacities.**

**COST  
key features**

- Building capacity by connecting high-quality scientific communities
- Providing networking opportunities for early career investigators
- Increasing the impact of research on policy makers, regulatory bodies and national decision makers as well as the private sector





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**COST DOES NOT FUND RESEARCH ACTIVITIES,  
but BUILDS on INDIVIDUAL GROUP RESEARCH  
ACTIVITIES and INTERESTS**

### **COST FUNDS:**

- Meetings and workshops
- Training schools and courses
- Short term scientific missions
- Dissemination and outreach activities



# The OVERALL GOAL

## *Aedes Invasive Mosquitoes – COST Action CA17108*

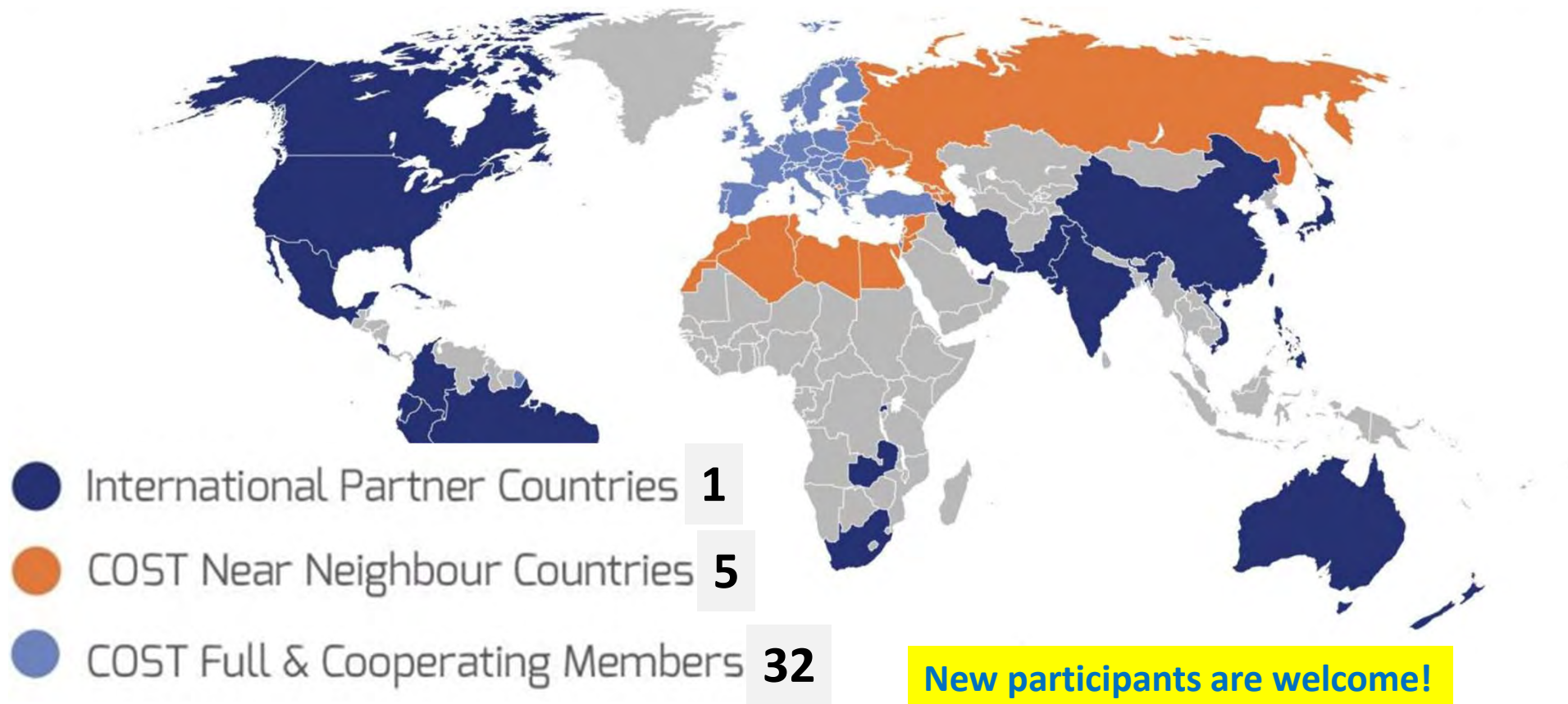
**AIM-Cost Action intends to develop synergies between scientists, decision-makers, productive sector and civil society necessary to harmonise and rationalise sustainable approaches for the surveillance and control of Aedes invasive species across Europe and beyond**



# STRUCTURE

**ACTION CHAIR:** Ale DELLA TORRE  
**DEPUTY CHAIR:** Dusan PETRIC  
**GRANT HOLDER:** SAPIENZA University

AIM-COST  
MANAGEMENT  
COMMITTEE



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MANAGEMENT  
COMMITTEE

**WG1**  
**MONITORING &  
SURVEILLANCE of  
AIMs and AIM-BVs**

Francis SCHAFFNER  
Miguel MIRANDA

**TRAINING SCHOOLS**

Andrei MIHALCA  
Bulent ALTEN

**WG2**  
**CONVENTIONAL  
& INNOVATIVE  
CONTROL TOOLS**

Antonios MICHAELAKIS  
Carla SOUSA

**STSMs**

Joao PINTO  
Marie PICARD

**WG3**  
**DISSEMINATION,  
CUSTOMISATION &  
COMMUNICATION**

Willy WINT  
Eva VERONESI

**SCIENCE COMMUNIC**

Filz GUNAY  
Ana Firanj SREMAC

# ACTIONS



Brussels, 13 April 2018  
COST 019/18

## DECISION

Subject: Memorandum of Understanding for the implementation of the COST Action  
"Aedes Invasive Mosquitoes" (AIM) CA17108

The COST Member Countries and/or the COST Cooperating State will first attached the Memorandum of Understanding for the COST Action Aedes Invasive Mosquitoes approved by the Committee of Senior Officials through written procedure on 13 April 2018.

Memorandum of understanding (MoU)

COST Association c/o EAS, 1 Avenue Copernic 9501 - 1050 Brussels, Belgium  
T: +32 (0)2 635 5800 / F: +32 (0)2 635 5801 / Webpage: [www.cost.eu](http://www.cost.eu)

COST Association  
will not be liable for the quality of information  
provided by the member countries and/or cooperating  
states of the COST Association.





## MONITORING & SURVEILLANCE of AIMs and AIM-BVs

**Task 1.1 – Review, optimisation and ToK of AIM monitoring & surveillance.**

**Task 1.1a – Identification of needs and gaps** of different sampling protocols, identification methods and national surveillance programs, to refine interventions from inception to assessment and to consolidate and harmonise recommendations

**Task 1.1b – Promotion of citizen science** based approaches of AIM monitoring and surveillance

**Task 1.2 - Integrating surveillance data analysis, spatial modelling & mapping to ensure the quality and applicability of future technical outputs at the European level and beyond.** Assessment of major potential ‘roadblocks’ in the work chain from sampling to dissemination, and provision of a set of guidelines for best practice sampling, modeling and output production.

**DL1.1 - Report/publication on sampling design for monitoring and surveillance of AIMs and EAIMBV (Y3-I)**

**DL1.2 - Publication of best practices for AIM monitoring and surveillance, including Road Map for AIM mapping from data to models (Y4-III)**

### CONVENTIONAL and INNOVATIVE CONTROL TOOLS

**Task 2.1 - Review, optimisation of current control options.** Exchanges of information and knowledge to consolidate and harmonise recommendations for optimising methodologies to control AIMS, for each species/geographical context.

**Task 2.2 - Quality evaluation of AIM control operations.** Exchanges of information on national/local experiences and cost-benefit analysis to develop protocols for quality evaluation in different settings.

**Task 2.3 - Innovative vector control tools/New Paradigms.** Assessment of novel experimental AIM control approaches and provision of guidance to the implementation and cost-effectiveness analysis of possible local pilot trials of novel control interventions supported by external funds.

**DL2.1 - Report/publication on conventional and novel AIM control practices in Europe (Y2-IV)**

**DL2.2 - Report on feasibility of scaling-up, cost-benefits and community acceptance of conventional and innovative AIM control approaches (Y4-IV)**

## DISSEMINATION, CUSTOMISATION AND COMMUNICATION

**Task 3.1 - Dissemination within the COST-Action network & to scientific external audience. AIM-COST web-site.**

**Task 3.2 – Customisation guidelines for surveillance, control and modelling outputs.**

**Task 3.2a –** Dissemination of surveillance and control guidelines (WG1-2) to stakeholders to solicit feedback and enable appropriate revision

**Task 3.2b –** Customisation and “translation” of technical mapping and modelling outputs for different end-user groups.

**DL3.1 - Web platform and science blog platform (Y1-II)**

**DL3.2 - Report on results from Delphi and specialised questionnaires(Y2-I)**

**DL3.3 - Synthesised feedback with recommendation for customising surveillance, control and modelling guidelines (Y4-III);**

**DL3.4 - Guidelines for customisation of mapped outputs (Y4-IV).**



### AIMCOST News



1st TRAINING SCHOOL -  
Harmonizing Aedes  
Invasive Mosquito (AIM)  
surveillance across  
Europe 13-17 Jan 2020



The main aim of Aedes Invasive Mosquito (AIM) COST Action is to establish a transboundary network of partners and institutions across Europe to cost effectively address the management of the risk of introduction and spread of Exotic Invasive Aedes Mosquito Borne Viruses (EIAMBVs).

WG1: MONITORING & SURVEILLANCE of AIMs and EIAMBVs

WG2: CONVENTIONAL and INNOVATIVE CONTROL TOOLS

WG3: DISSEMINATION, CUSTOMISATION AND COMMUNICATION

### Scientific Events

- Training School: Harmonizing Aedes Invasive Mosquito (AIM) surveillance across Europe 13-17 Jan 2020
- 2020 Annual AIM-COST meeting, Lisbon, Portugal 12th-13th February



WEBSITE:  
<http://www.aedescost.eu/>



# Ongoing task

Guidelines for surveillance and control of AIM exist (**ECDC, EU-WHO,...**) but **not applied systematically across Europe**, with no widely accepted quantitative evaluation, nor assessment or comparison tools

## Our objective

Define how best to **customise** national **implementation** of surveillance and control interventions within a **standardised** and sustainable framework, in order to harmonise the use of PH surveillance data and spatial analyses methods across Europe and streamline the analytical, modelling and mapping process



**Francis Schaffner**

*Francis Schaffner Consultancy, Riehen,  
& University of Zurich, Switzerland  
<https://vectorsurveillance.com>*

**Filiz Gunay**

*Hacettepe University, Biology Department,  
VERG, Beytepe/Ankara, Turkey*

**Antonios Michaelakis**

*Benaki Phytopathological Institute,  
Kifissia, Greece*

**Andrei D. Mihalca**

*Universitatea de Științe Agricole și  
Medicină Veterinară Cluj-Napoca Cluj-  
Napoca, Romania*



**Dušan Petrić**

*University of Novi Sad,  
Serbia*

**João Pinto**

*Instituto de Higiene e Medicina  
Tropical, Lisbon, Portugal*

**Willy Wint**

*Environmental Research Group Oxford,  
Zoology Department, Oxford, UK*

**Alessandra della Torre**

*Department of Public Health and  
Infectious Diseases, Sapienza University,  
Rome, Italy*

# The CHALLENGES

- Different timing of invasion/colonization across Europe, creating different levels of expertise at country level
- Lack of harmonisation of monitoring/surveillance approaches
- Lack of cost-effective control methods and need of more cost-effective ones
- Need of multidisciplinary expertise (e.g. entomological, epidemiological, environmental, climatic, demographic, mathematical, statistical, computational, sociological)
- Weak linkage between academics, public health professionals and policy-makers at the national and international level
- Weak integration of private sector
- Uninformed and weakly engaged civil society
- Lack of a transboundary network of partners integrating all these expertise and stakeholder groups



**AIM-Cost Action intends to develop synergies between scientists, decision-makers, productive sector and civil society necessary to harmonise and rationalise sustainable approaches - both conventional and novel – for the surveillance and control of Aedes invasive species across Europe and beyond.**

## HOW?

1

**By creating a Pan-European multidisciplinary network of scientists with common background on AIM bionomics, surveillance and control** to identify and develop innovative research concepts and ideas and to promote the implementation of optimised/innovative monitoring/control campaigns projects in synergy with European Organizations (e.g ECDC, EU-WHO, EMCA, ECSA, etc)

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## HOW?

2

**By nurturing a new generation of medical entomologists** with inter-disciplinary expertise on AIM related activities and international collaborative perspectives, and able to maintain & improve expertise and capacity to prevent or control AIMS and related health risks in Europe and beyond.

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## HOW?

3

**By creating a synergistic relationship between scientists private companies, citizen scientists and decision-makers across Europe and beyond for the implementation of best practices and innovative tools in local AIM and EAIMBV surveillance/monitoring and control campaigns in order to overcome present fragmentation in knowledge and interventions and eventually improve health and well-being in Europe and beyond.**

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## HOW?

4

**By raising public awareness of AIMS, related health risks and control options** to obtain a more informed consensus on preventive Citizen Science community-based interventions, as well as on possible innovative control approaches to be implemented under different epidemiological scenarios



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## HOW?

5

**By jointly refining, optimizing, customising and delivering guidelines and protocols for AIM surveillance/ monitoring/ control in conjunction with international Agencies (e.g. ECDC, EU-WHO, EMCA) and PH end-users to promote their implementation at national and local scales.**