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AIM

Aedes Invasive Mosquitoes

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EUROPEAN COOPERATION IN SCIENCE & TECHNOLOGY

# Virtual Workshop: Communication and outreach approaches for Citizen Science community engagement in AIM monitoring, surveillance and control

**April 5th 2022**

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**Workshop Description and Rationale**

In the context of the dissemination activities that are part of AIMCOST Workgroup 3 a virtual workshop on *Communication and outreach approaches for Citizen Science community engagement in AIM monitoring, surveillance and control* was organised on April 5th 2022.

The Workshop rationale was circulated as follows:

AIM Cost action has been working hard to develop guidance and information of the surveillance and control of *Aedes* Invasive Mosquitoes. There are many strategies that can be employed at a national, regional and local level, and by practitioners, entomologists and the community. One of the biggest challenges is how best to deliver effective communication to effect the changes in behaviour and best practice for maximum impact on the control of mosquitoes. Developing outreach strategies to engage communities with Citizen Science is key to mounting effective actions that lead to positive changes for improved health protection. Across the world, communities are challenged by the threats posed by urban mosquito vectors. Although there are many tools for surveillance and control, urban mosquitoes and associated diseases persist. As a medical entomology community can we improve our communication with the public? Are there ways in which we can deliver our outreach messages to deliver greater impact? With community engagement, is the control of urban invasive mosquitoes insurmountable?

The aim of the workshop is to expand the knowledge and share experiences in communication and outreach associated with Citizen Science schemes, with particular reference to *Aedes* invasive mosquitoes. This workshop will go beyond the world of mosquitoes and will have presentations from scientists in other disciplines and species groups.

Once the participants had been informed, the workshop was recorded and a participants log kept (see below)

**Meeting Content, Attendance and Feedback**

The meeting programme is shown in ***Table 1***, with topics including Communication in recording schemes, engaging the public, driving behavioural change, what can COVID teach us, from a number of countries in EU and outside. The meeting was recorded and can be viewed at

The meeting registered 112 participants (see Teams meeting attendance log in **Error! Reference source not found.** below. Note emails have been removed from these lists) of which 103 qualified as COST invitees.

Abstracts of each presentation are provided after ***Table 1***, for information. Available presentations can be downloaded at from the following link: https://www.aedescost.eu/index.php/citscicommsworkshop, and recordings of the workshoip have been posted on Youtube at https://www.youtube.com/watch?v=sAf9iTq0WFg, and https://www.youtube.com/watch?v=V-eBPzrZZKU . A summary of the question and discussion are available via the recordings.

A short Survey was cirulated to the participants (https://ec.europa.eu/eusurvey/runner/AIMCOST_COMMS_FEEDBACK), shown in ***Figure 1***, below. The survey link was posted in the meeting chat and emailed to all partcipants after the workshop. 69 partcipants rcompleted the survey – a response rate of 67.5%. The scores, shown in ***Table 2***, indicate that 95.1% of the repsonses were 4 or 5 (of a maximum 5), which suggests a very high level of approval

**Table 1: Workshop Programme**

| | |
|---|---|
| 1300 CET | Start of Workshop |
| | |
| 1300-1305 | Introduction: William Wint, AIMCOST WG3 Lead |
| | |
| 1305-1325 | Non-mosquito related Citizen Science invertebrates/ wildlife – **Helen Roy**, Centre for Ecology and Hydrology (UK) |
| 1325-1345 | *Tick surveillance in the UK, citizen science and communication* - **Kayleigh Hansford,** Senior Medical Entomologist, UK Health Security Agency (UK) |
| 1345-1405 | Non European mosquitoes/ invasive mosquitoes – experiences from US – **Monique Spence,** Miami Dade, US |
| 1405-1415 | Questions |
| 1415-1435 | *Citizen communication in relation to surveillance and control of AIM's in The Netherlands* **Adolfo Ibáñez-Justicia** Centre for Monitoring Vectors - Netherlands Food and Consumer Product Safety Authority (Netherlands) |
| 1435-1455 | *Science Communication in the Digital Age* – **Pau Rubio**, Communications Coordinator at the Barcelona Institute for Global Health , ISGlobal (Spain) |
| 1455-1505 | Questions |
| 1505-1520 | BREAK |
| 1520-1540 | Using behavioural science to encourage protective and preventative behaviour change for vector-borne disease risks. **Richard Amlôt,** Head of Behavioural Science, UK Health Security Agency (UK) |
| 1540–1600 | *Sciences at the policy-communication nexus during the COVID pandemic*, **Marius Gilbert,** Spatial Ecology and Epidemiology Group, Free University of Brussels |
| 1600–1620 | Mosquito Alert experiences of communication: invasive mosquitoes in the media, **Alex Richter-Boix**, UPF-Mosquito Alert |
| 1630-1700 | Discussion & feedback |

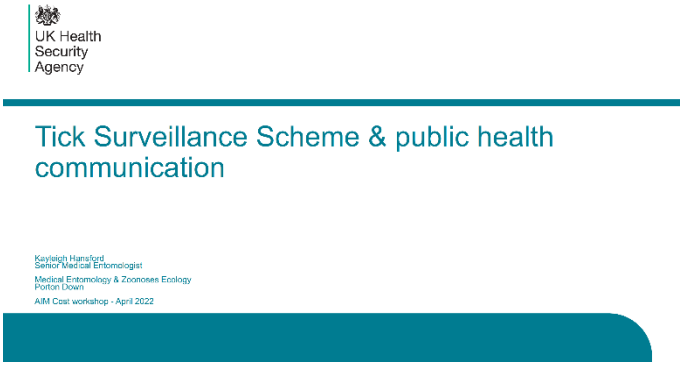
## Presentation Abstracts and Comments from participants

**Non-mosquito related Citizen Science invertebrates/ wildlife – Helen Roy,** *Centre for Ecology and Hydrology (UK)*


**ABSTRACT:** The presentation was provided in the form of a 20 minute video presentation describing the citizen science ladybird recoding scheme in the UK. This stared of as an initiative to enlist citizen scientists to keep track of the invasive harlequin ladybird, but evolved into a much wider ranging scheme covering many ladybird species, with extensive literature, dissemination material and many associated publications including field guides. Apps for mobile platforms, and educational material aims at all school ages have also been produced and the initiatives have received significant attention in the national and local press. The results have been extensive and scientifically robust for a number of years. It may be, however, that ladybirds are a relatively photogenic and appealing insect, in comparison to the invasive mosquitoes, which are also somewhat more difficult to identify. This suggests that the communication strategy for mosquitoes needs to be adapted to take this into account.

**Comments:** Might be effective to set up mosquito days for schools, akin to the existing ladybird day. Also working from home has made more people aware of citizen science apps.

**Tick surveillance in the UK, citizen science and communication - Kayleigh Hansford,** *Senior Medical Entomologist, UK Health Security Agency (UK)*

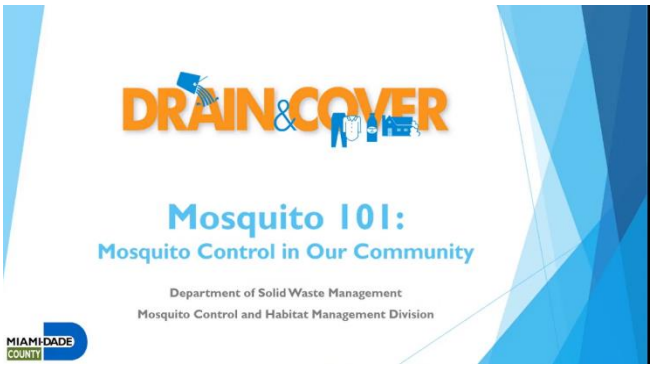



Vector-borne disease risk is intrinsically linked to the distribution of tick vector species. To assess risk and anticipate disease emergence, an understanding of vector distribution, host associations and seasonality are needed. The UK Heath Security Agency have been running a national Tick Surveillance Scheme since 2005, collecting data and mapping UK tick species. This project is supported by a wide range of recorders who submit data, including members of the public, animal and public health experts, as well as wildlife charities and entomologists. The Scheme now has over 10,000 records, and the data suggest that tick encounters may be increasing, along with the distribution of our main species, *Ixodes ricinus*. Continued engagement with recorders is required to run a surveillance scheme. Each of those submitting records have been able to interact with UKHSA on tick issues at a local level. They have also been given public health information on ticks and associated tick-borne disease risk. Such interactions highlighted to the need for centralised information on these subjects, and out of this, the Be Tick Aware Toolkit was developed. This multi-stakeholder project produced

several key outputs including a document with background information on ticks, Lyme disease and how to engage in tick awareness campaigns. Whilst aimed at local authorities and other organisations response for health at a local level, it also produced posters and leaflets which provide key tick awareness information and messages for the public. The toolkit and associated resources are available from https://www.gov.uk/guidance/tick-surveillance-scheme.

**Comments:** Links between citizen science apps and the national health bodies promote awareness and is enhanced by widely disseminated FAQ sheets in lay language

**Non European mosquitoes/ invasive mosquitoes – experiences from US – Monique Spence,** *Miami Dade, US*




**ABSTRACT:** The presentations describes the activities and communication programmes related to mosquito management in Florida. This has been in place since 1935 and the long history encourages people to trust the programme. Activities include targeted inspections, a door to door approach with one ion one communication, and provision of 'leave behind information and extensive outreach, especially since the advent of Zika. Outreach continues all year and there is a 24 hour phone help line. Community centres, schools, churches, and synagogues are visited regularly. An annual conference is held, hosted by local government at the start if the peak season in April, and continuous campaigns ('Drain and Cover') with adverts signage and social media messaging are run throughout the year

**Comments**: Availability to respond to public queries essential to success for control activities, backed up by extensive information campaigns to multiple audiences (schools, churches, media) and clear recommendations for simple action like "Drain and Cover"

**Citizen communication in relation to surveillance and control of AIM's in the Netherlands - Adolfo Ibanez Justicia,** *Centre for Monitoring Vectors - Netherlands Food and Consumer Product Safety Authority (Netherlands)*


**ABSTRACT:** In the Netherlands, introductions of *Aedes albopictus* have been notified by citizens since 2016 in urban areas. Intensive surveillance and mosquito control followed the confirmation of the species identity in the laboratory. In many cases, inspections discovered early stages of local foci of *Ae. albopictus*, being mainly immature stages breeding in artificial containers in the backyards of private houses. To eliminate the foci, door-to-door mosquito control was

implemented in the areas based on community engagement, intensive source reduction and the use of larvicides.

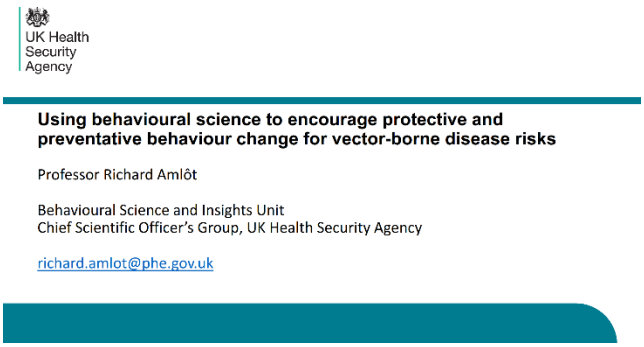
This talk is presents practical information and communication strategies to inform and engage citizens for notification of presence of Aedes Invasive Mosquitoes to national authorities (NVWA), and also engage citizens on eradication of small foci. For AIM's citizen notification, a web based notification system is presented that is linked to the NVWA, authority competent in AIM's surveillance and control. Citizen notifications to NVWA complement active surveillance in urban - residential areas. The website also provides detailed information about the species, advice for source reduction home owners, advice for travellers, updated findings of AIM's and last news and documents related to surveillance and control AIM's. However, engagement strategies cannot only rely on information provided in website. Community engagement for successful AIMs eradication campaigns requires complete personalized information for the home owners involved, as a printed official letter, a leaflet with clear instructions for source reduction, but also frequent visit of trained inspectors to the properties (communication on site). To date, all detected *Ae. albopictus* foci in the Netherlands have been successfully confined, and the majority of the populations have been eradicated in one season. This work stresses the importance of community engagement during rapid mosquito control interventions to eliminate emerging small populations in new areas with the aim of prevent the establishment of *Ae. albopictus* as long as possible.

**Comments:** Clear messaging and public access to monitoring and elimination results very important

**Scientific Communication in the Digital Era - Pau Rubio*,*** *Communications Coordinator at the Barcelona Institute for Global Health , ISGlobal (Spain)*


**ABSTRACT:** The current communications environment is the result of two previous revolutions: the invention of the printing press in the XVth century made possible the creation of mass media later on. For the first time in history, a single source could provide messages to massive audiences live or with very short time spans. Five centuries later, the invention of the internet and the subsequent irruption of social media democratised the access to mass communication means and created a new communications paradigm. As a consequence of that, we live now in a complex communications environment where audiences are extremely fragmented and messages are short and ephemeral. In this presentation we provide a basic framework to deal with this increasing complexity and to produce a communications strategy with a particular purpose.

**Using behavioural science to encourage protective and preventative behaviour change for vector-borne disease risks. Richard Amlôt,** *Head of Behavioural Science, UK Health Security Agency (UK)*




**ABSTRACT:** Behavioural science approaches and frameworks exist to help gather insights, understand barriers and facilitators, and to develop interventions for behaviour change. The speaker first provided an overview of outcomes and lessons learned by the Behavioural Science and Insights Unit at HSA about behavioural and psychological aspects of emergencies and disasters, and followed up with specific illustrations relating to limiting COVID transmission. The steps required to gather insights and guide intervention development were set out. A full description followed of a work programme in Anguilla to identify and understand barriers and facilitators to adoption of protective and adaptive behaviours within communities faced with vector-borne disease threats. The resulting COM-B (Capability, Motivation, Opportunity) analysis was presented. It was emphasised that Behavioural science approaches and frameworks exist to help gather insights, understand barriers and facilitators, and to develop interventions for behaviour change.

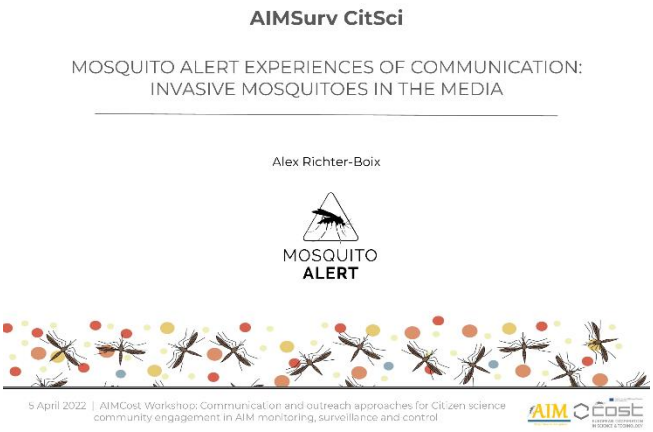
**Comments:** The public can easily be overwhelmed by solutions, so simple messaging and recommendations essential to success. It's better to decide "what is the behaviour that we want to change, simplify it, and give the info aiming that they change the behaviour"

**Sciences at the policy-communication nexus during the COVID pandemic - Marius Gilbert,** *Spatial Ecology and Epidemiology Group, Free University of Brussels*


**ABSTRACT:** During the Covid19 pandemic, many scientists working in the field of epidemiology became involved into expert groups informing the government, and were put at the forefront of communication in national media. Both missions were carried out in difficult conditions of emergency, under strong political, media and public opinion pressure. In this presentation, I report from my own experience of being a member of the Expert Group on the Exit Strategy (GEES) that informed the Belgian Prime Minister Sophie Wilmes for six months from the onset of the first lockdown to the normalization of public life that followed in the summer 2020, and from my role as expert in the national media during the entire Covid19 crisis in Belgium (March 2020 - March 2022). The talk highlights a number of challenges that were encountered : the change in temporality compared to conventional epidemiology, the lack of shared understanding, the diversity of recipients of the scientific message, the very fast evolving epidemiological situation and state of knowledge, the weight of personal observations, the "franc-tireurs" and the biases of media communication and debates. I conclude with a number learning that were found along the way and that can address some of those challenges.

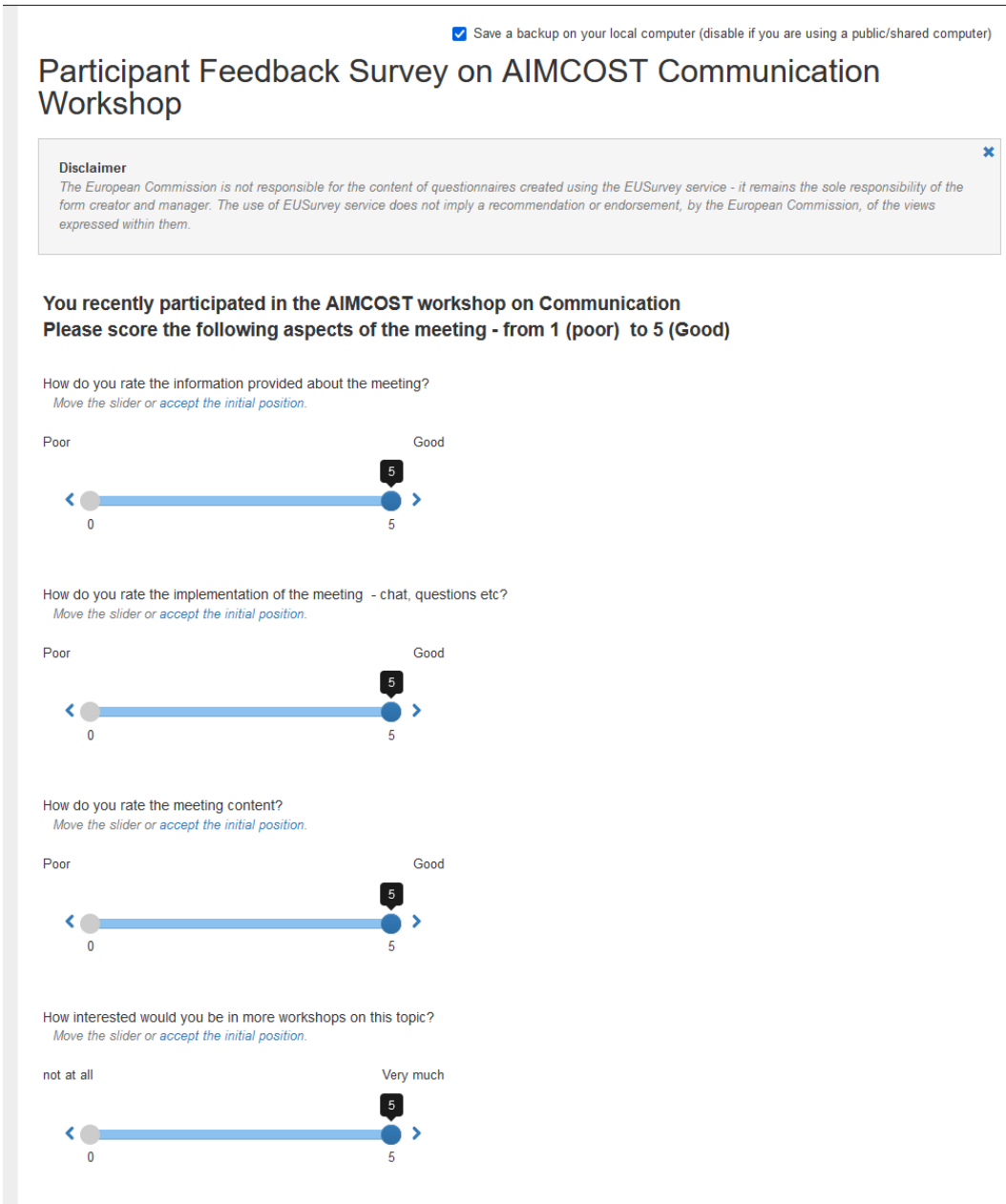
**Comments:** “We communicate poorly about the things we think are obvious”

**Mosquito alert experiences of communication: invasive mosquitoes in the media -Alex Richter-Boix,** *UPF-Mosquito Alert*




**ABSTRACT:** Mosquito Alert is both a science communication and research tool: information about mosquitoes is distributed to a broad public, and at the same time large amounts of data are collected for surveillance and research. Mosquito Alert use mass media and social media channels to reach the largest possible share of population as the more participants, the better spatial and temporal resolution will have about mosquitoes. However, mass media is always selective respect the news and messages they publish and transmit, and, in that way, mass media have a gatekeeping function and shape reaching potential citizen scientists. Our communication actions always compete for attention with other events of public interest, where local or global events can have a positive or a negative effect on the attention given to the project and result in different participation rates. The variables we observed help during the communication campaign are: using the already existing media attention towards mosquitoes (nuisance make a topic in summer, or local or global crisis), to direct appeal to citizens to participate in a citizens science project, and to highlight the social and health relevance of mosquitoes.

## Figure 1: Feedback survey




### *Table 2: Feedback Survey Results*

| Score | Q1 | Q2 | Q3 | Q4 | Mean % |
|---|---|---|---|---|---|
| **0** | 0 | 0 | 0 | 0 | **0.0** |
| **1** | 1 | 0 | 1 | 0 | **0.8** |
| **2** | 2 | 1 | 0 | 0 | **1.2** |
| **3** | 1 | 2 | 1 | 3 | **2.9** |
| **4** | 10 | 14 | 17 | 10 | **20.6** |
| **5** | 49 | 47 | 45 | 42 | **74.5** |
| | **63** | **64** | **64** | **55** | |