

Climate change and invasive mosquito species: the role of nuclear applications

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IAEA Scientific Forum
Nuclear
Technology
for Climate

Mitigation, Monitoring, Adaptation

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Convention on Biological Diversity (Rio Earth Summit 1992)

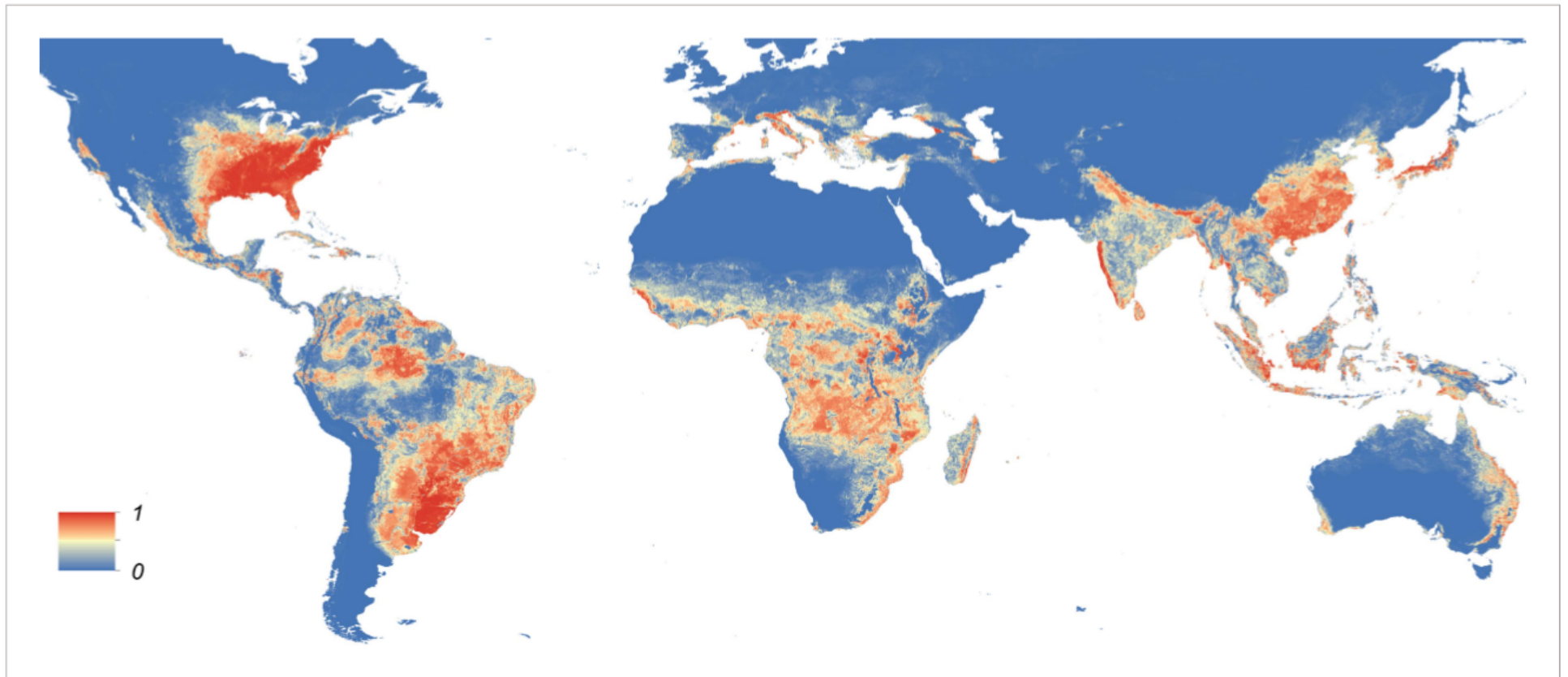
“An invasive alien species (IAS) is a species that is established outside of its natural past or present distribution, whose introduction and/or spread threaten biological diversity”



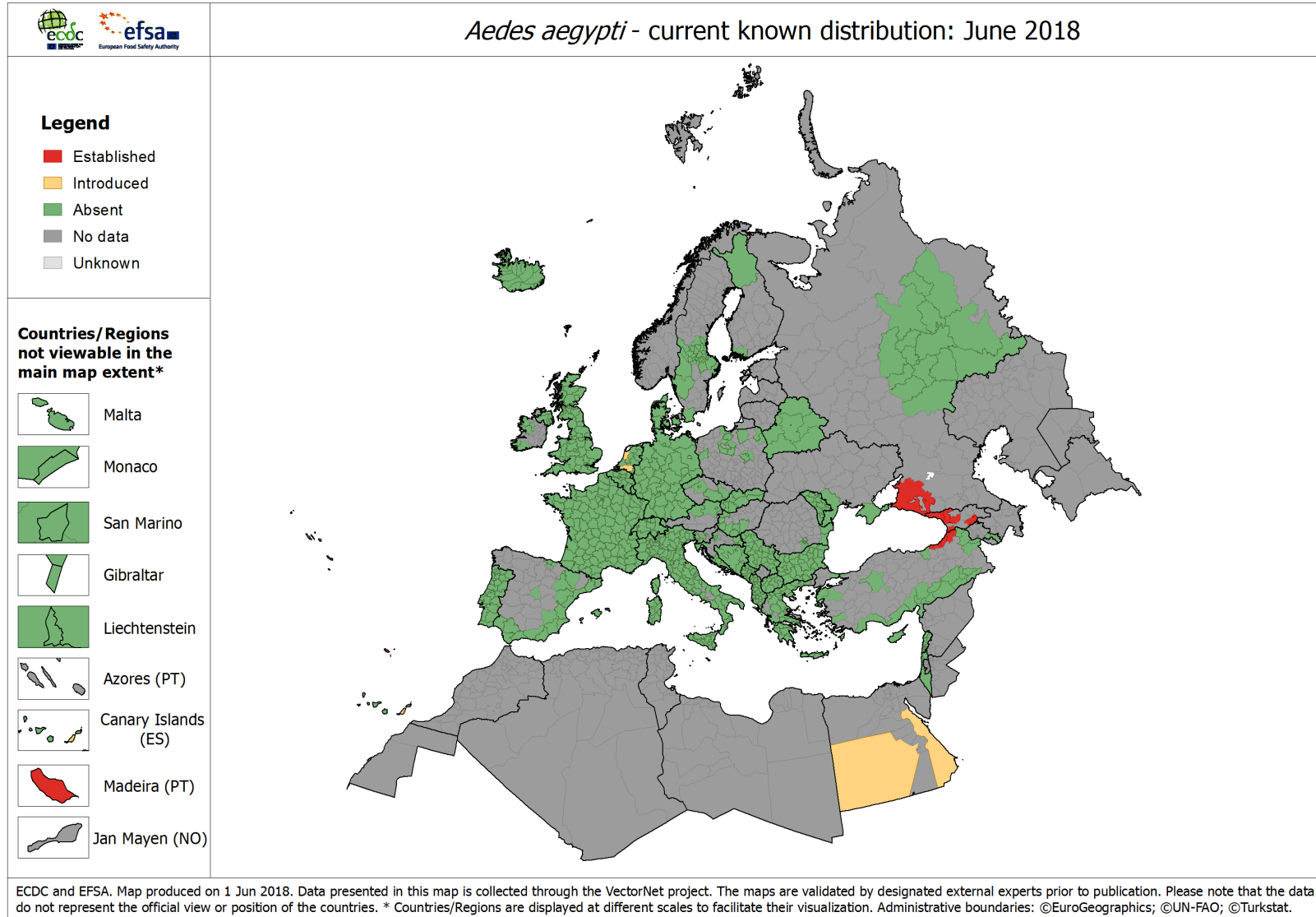
Aedes albopictus

eLIFE Research article

Ecology | Epidemiology and global health



Aedes aegypti





Sterile Insect Technique - Mosquitoes

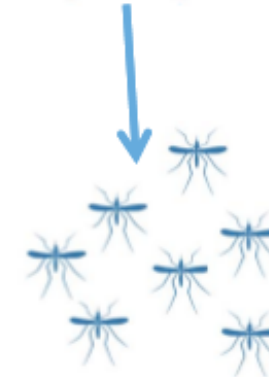
The SIT Package:

- Mass rearing
- Sex separation
- Sterilization
- Packing, Transport, Release
- Monitoring
- Quality control

1. MALE STERILISATION



Irradiation



2. RELEASE

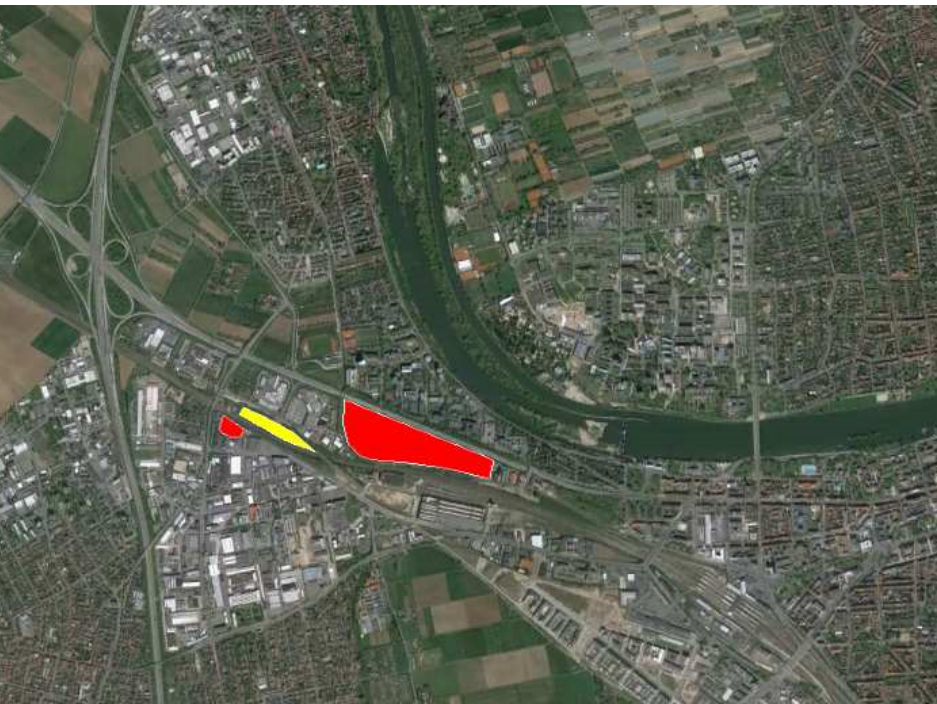


3. POPULATION SUPPRESSION



Towards the elimination of *Aedes albopictus* from Heidelberg, Germany.

**In collaboration with Kommunale Aktionsgemeinschaft
zur Bekämpfung der Schnakenplage (KABS)**



**Sterile males
produced in Italy
and released in Germany**

2016: 85,000

2017: 250,000

2018: 500,000

Mean Reduction Viable Eggs 99.7 %



ACKNOWLEDGMENTS

