

# Instituto Peruano de Energía Nuclear (IPEN)

**International Atomic Energy Agency  
Technical Cooperation Project**

**RLA5074- Strengthening Regional Capacity in Latin America and the Caribbean for  
Integrated Vector Management Approaches with a Sterile Insect Technique  
Component, to Control Aedes Mosquitoes as Vectors of Human Pathogens,  
particularly Zika Virus.**

**C7-RLA5074-001**

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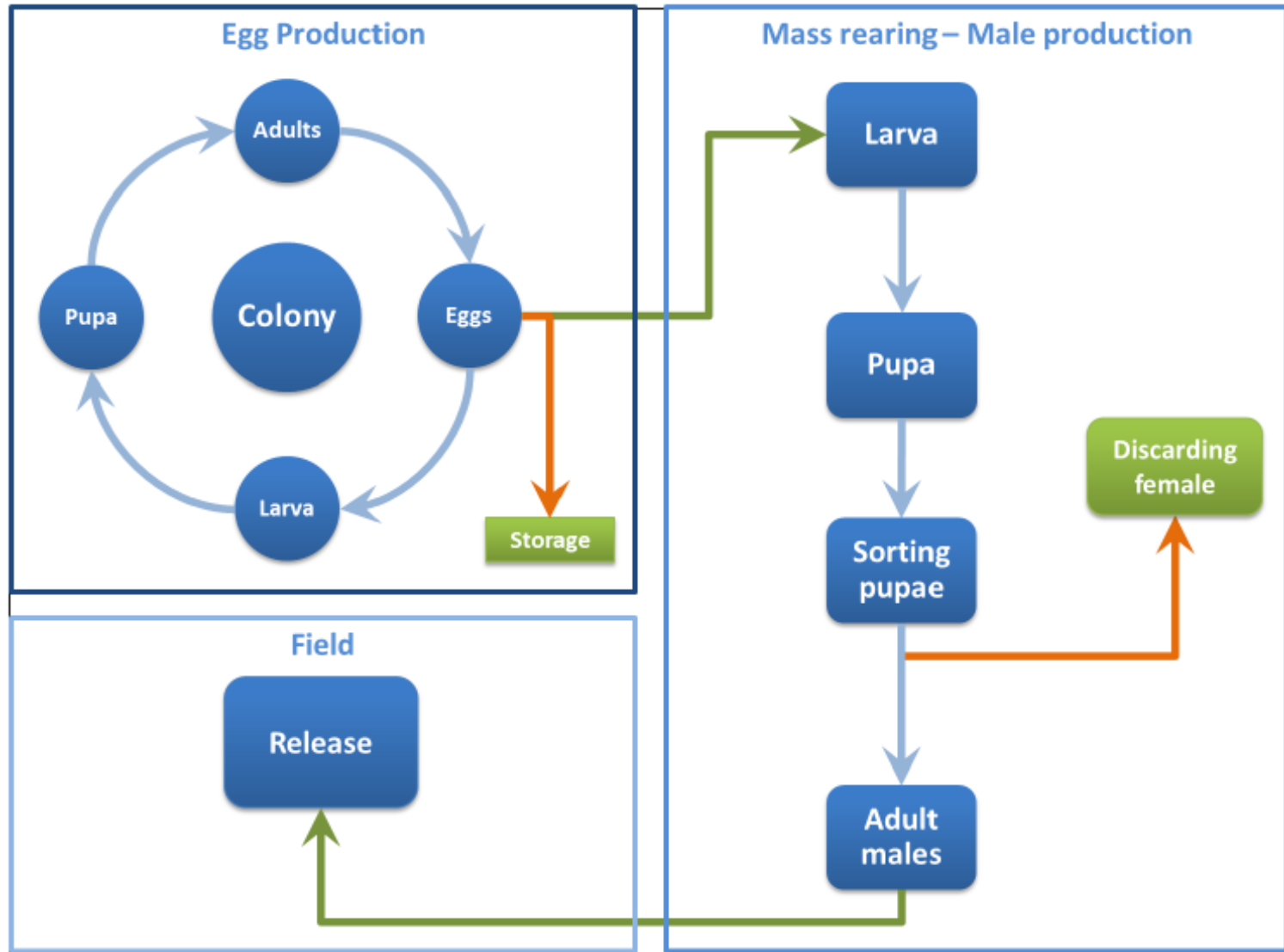


**INSTITUTO PERUANO DE ENERGÍA NUCLEAR - IPEN**



## PARTICIPANTES

- Instituto Peruano de Energía Nuclear (IPEN)
- Instituto Nacional de Salud (INS)
- Universidad Peruana Cayetano Heredia (UPCH) –  
Centro de Innovación Científica, Ecológica y  
Académica (CICEA)
- Dirección General de Salud Ambiental e Inocuidad  
Alimentaria (DIGESA)

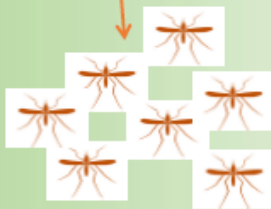


## Sterile Insect Technique (SIT)

### 1. Male Sterilization



Irradiation



### 2. Releases



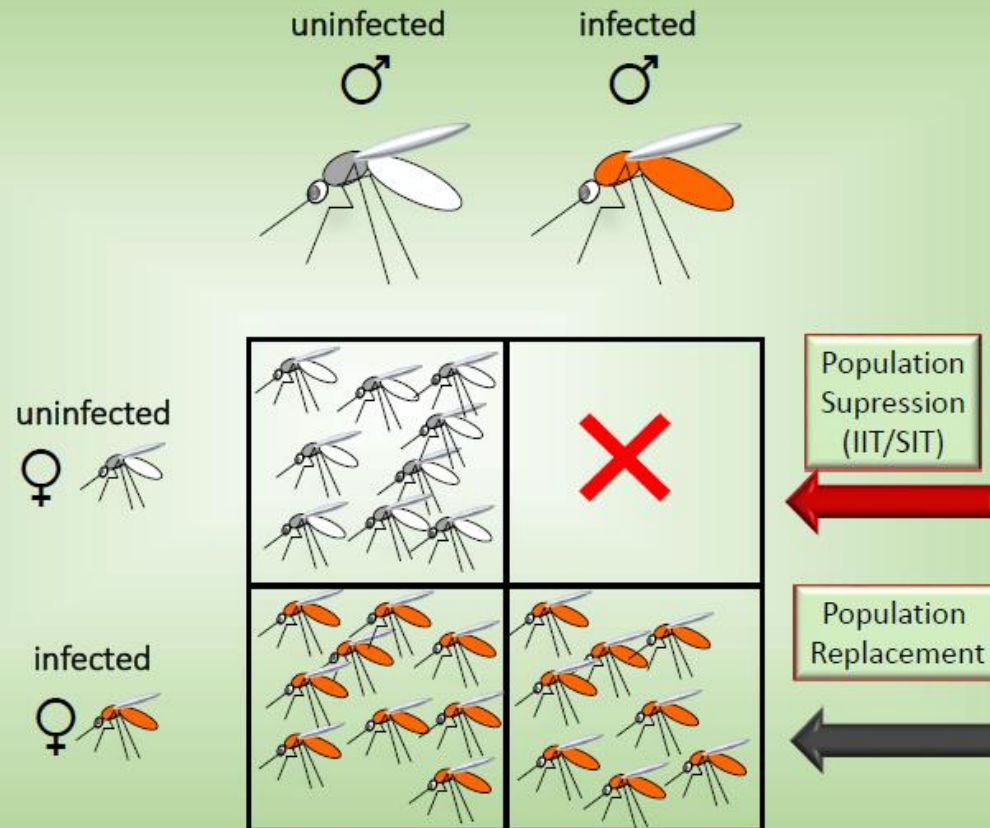
### 3. Supression



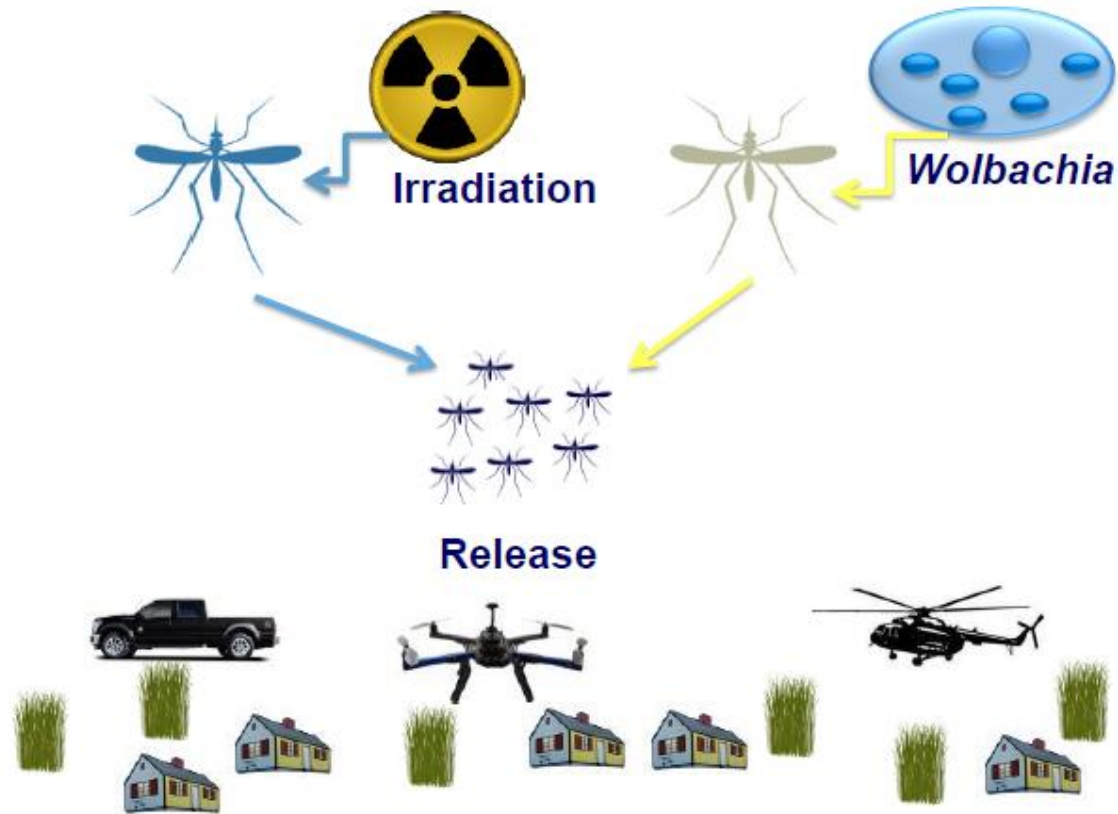
### Birth Control Method:

- Mass rearing
  - Sex separation
  - Sterilization (irradiation)
  - Packing, transport, release
  - Sterile matings
- = no offspring

## The Wolbachia approach (Suppression) – IIT/SIT



## COMBINED SIT + IIT APPROACH



## Sterile Insect Technique (SIT)

- **Advantages**
  - Proven and environment friendly technology
  - No risk of resistance
  - Irradiation compatible with other technologies
  - Biosecure and sustainable
  - Positive public perception – no regulation – no IP
- **Limitations**
  - Self-limiting (sterile), but therefore biosecure and sustainable
  - The misconception that irradiation is detrimental to mosquitoes
  - Investment for irradiator (cheaper solutions becoming available)
  - Sex sorting



**“No hay signo más claro de locura que repetir lo mismo una y otra vez esperando resultados distintos”**

**“There is no clearer sign of madness than to continuously repeat the same thing and to expect distinct results”**