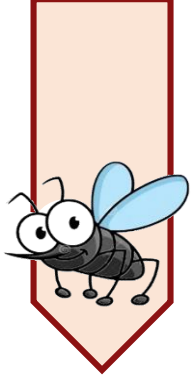
Modeling the populations dynamic of *Ae. albopictus* and response to vector control at the Réunion island



Developing a model to predict the effects of alternative control methods on:

_ Mosquitoes populations

_ **Dengue transmission**

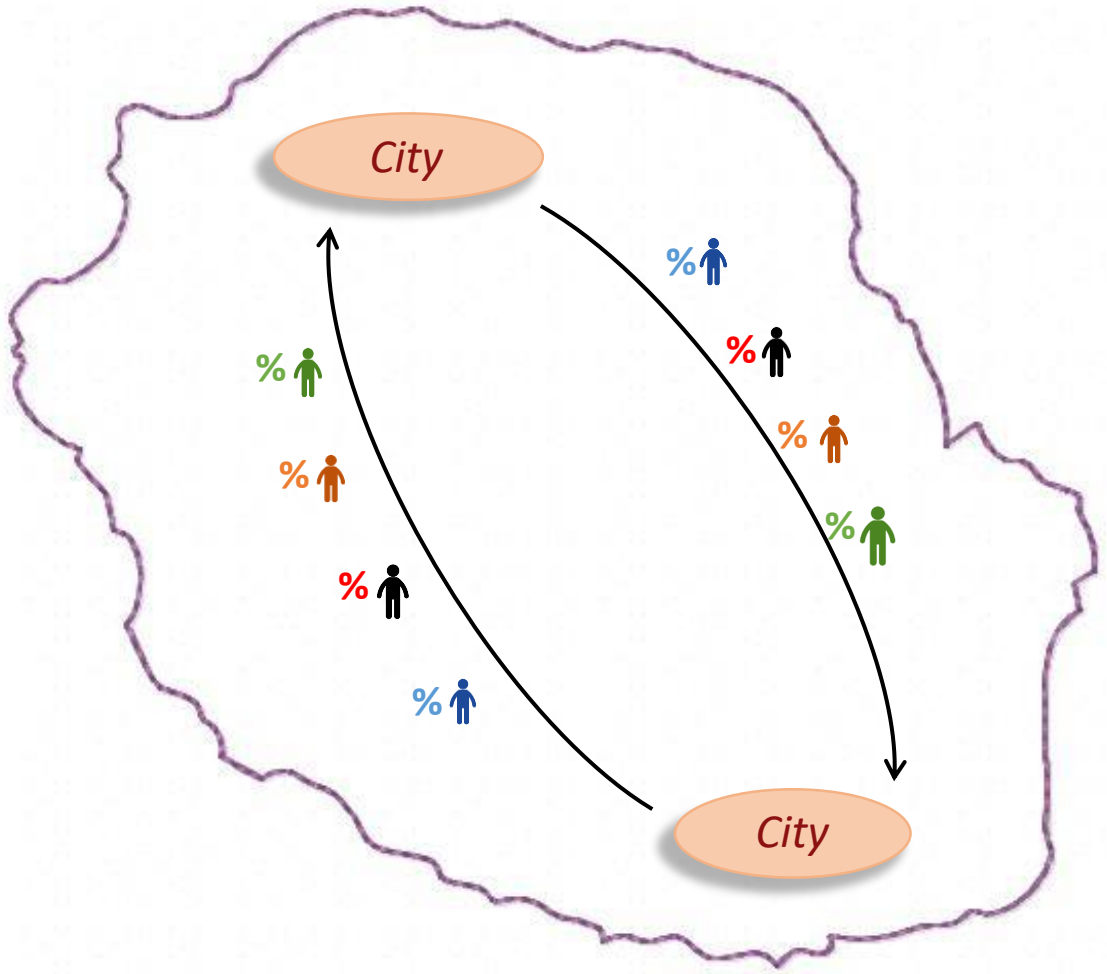
cirad

PhD student : Marion Haramboure

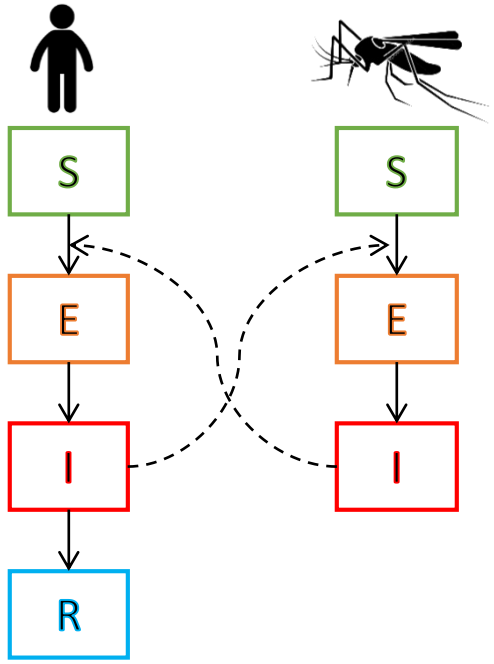
Directors : Annelise Tran and Pierrick Labbé

Regional scale

⇨ **To study the effect of migrations between cities on the dengue transmission and the optimization of control methods.**

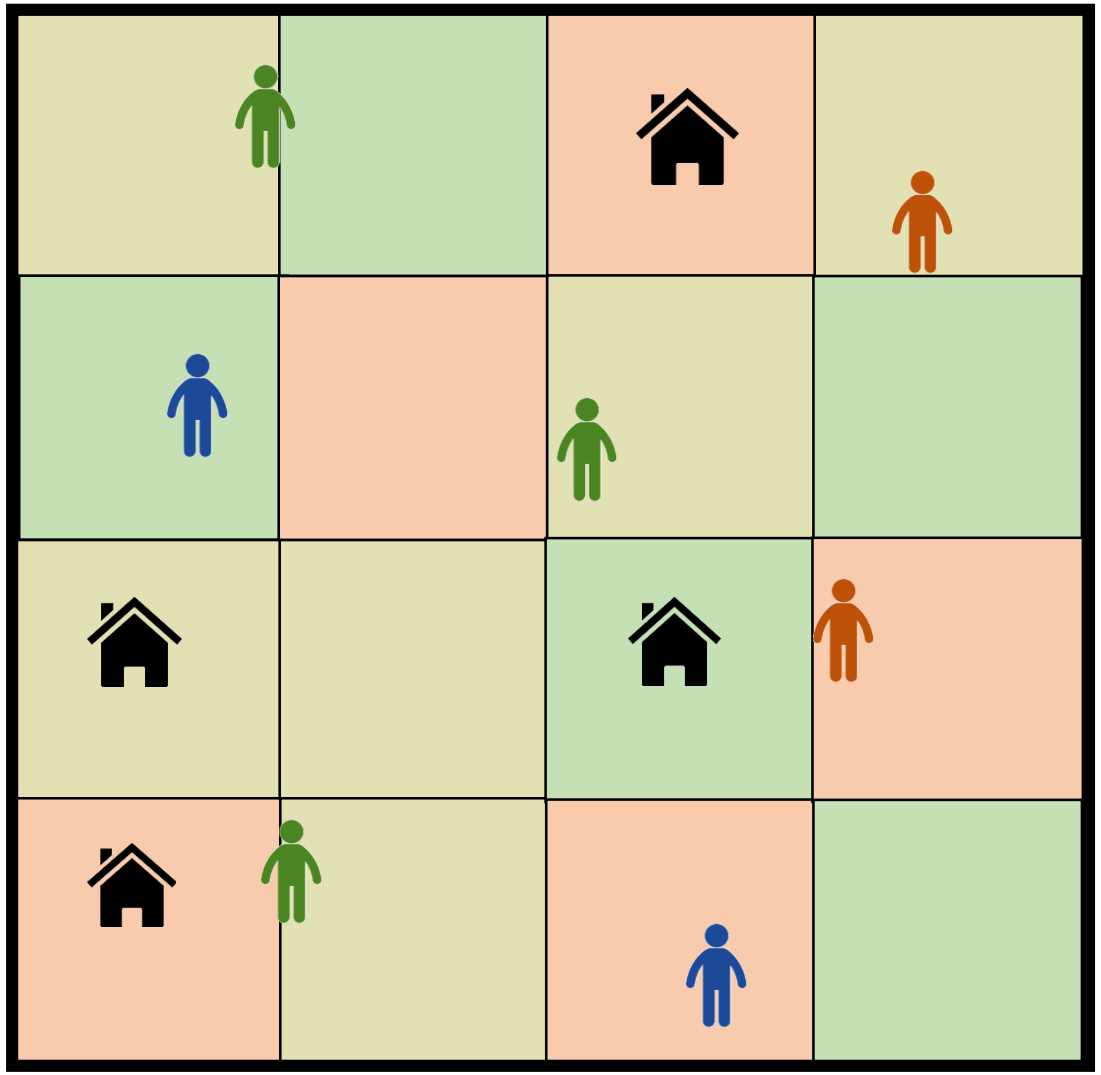


- **Coupling the dynamic model of mosquito population with a SEIR model in each city:**



- **Human migratory between cities (Insee)**

Local scale



⇨ **To study the effect of individual behaviors on dengue transmission and the optimization of control methods.**

- **An « automata cellular » for mosquito population**
- **An agent based model for human**