

Experience with GM Mosquitoes Regulation in Burkina Faso



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Outline

- Background
- Preparing for GE insect application
- Application handling and decision making
- Voices from activists

Background

- Prior to GE Mosquitoes,
 - Functioning Regulatory system already in place : NBA, National Biosafety Scientific Committee, National Biosafety observatory
 - Experience in handling several applications with Bt cotton (2003-) and Pod Borer Maruca Resistant Cowpea for different steps: greenhouse, CFT, pre-release, commercial release
 - GM fungus (*Metarrhizium robertsii*) for mosquito control (confined trials)

Background (cont'd)

- **Communication with the public** : sensitization and participation to the decision making process
- **Use of forms** as key parts of the application dossier
 - **Collect all necessary information** from the applicant for risk assessment and decision making and related activities
 - **Forms adapted to plants**: several aspects N/A to other organisms e.g. allelopathy, impact of water table, gene flow through pollen dispersal, etc.

Moving to GE insects

- **Need to adapt to a new situation**
- **Discussions** with the applicant starting from the plant forms: to understand the upcoming application – outline the necessary regulatory requirements
- **Contributions from capacity building activities:**
 - **short trainings : ABNE, ICGEB, etc.**
 - **exchange visits** to countries with more advanced regulatory bodies (USA-Virginia Tech, Canada, Australia, Colombia, Brazil)
 - **Hosting experts** for in-house trainings

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1st GM mosquitoes application



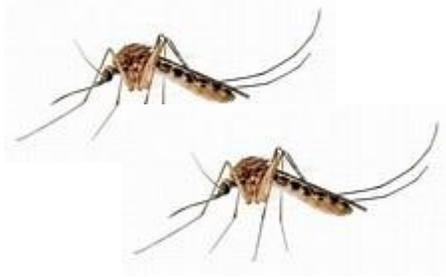
ARRETE No 2016/070/MESRSI/SG/ANB du 12/04/2016 : Authorization for Laboratory testing of GM mosquitos (confined conditions)

- Authorization to import eggs from transgenic of *An. gambiae* from Target Malaria laboratory in Perugia (Italy)
- Development and Maintenance of *An. gambiae* colonies in the insectary
- Introgressive backcrossing of the transgenes (homing endonuclease gene and two fluorescent marker genes) into *An. coluzzii*
- Certification of the confinement insectary as an ACL2 before the beginning of the activities (prerequisite condition)

Main Activities under the 2016 permit

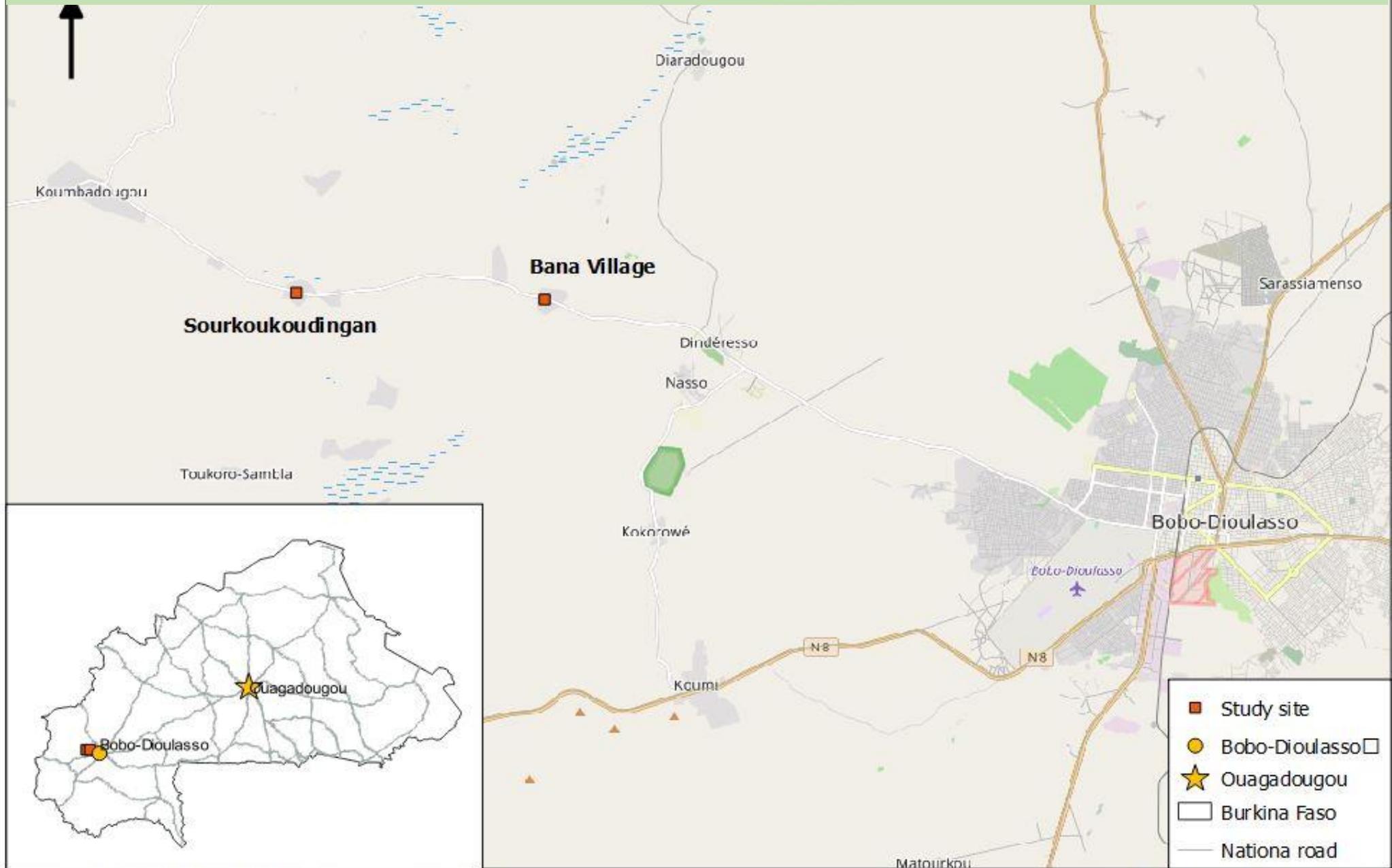
- Maintenance of colonies of GM *An. coluzzii*
- laboratory tests : transgene stability in *An. coluzzii*, mating competitiveness, susceptibility to currently used insecticides, etc.
- Public engagement :
 - two villages and other locations in the country;
 - Meeting key stakeholders
 - Visits of the insectary
- Progress Report submitted to the ANB (permit condition)

2nd Application : Limited release



- **Controlled dissemination** (control measures in place to limit a widespread dispersal and persistence) : male sterile mosquitos, limited number of mosquitoes, “ecologically isolated release sites”, dry season not favorable to mosquito survival, etc.
- Objectives :
 - Assess **the survival** of GM mosquitos in the environment
 - Assess **the dispersal** of GM mosquitos from the point of release

Release scheduled in **one village** (25-30 km from Bobo-Dioulasso)



Application for controlled release

- ca.10,000 male sterile GM mosquitoes to be released
- Marking the mosquitos with fluorescent dye before the release
- Recapture of the mosquitoes
- Collecting data on the survival and dispersal of released mosquitos

Current status of the application

- Risk assessment completed by the CSNB (National Scientific Advisory Committee) and report including recommendations submitted to the ANB
- Public consultation done in the two targeted villages
- Decision document (DD) drafted and submitted to the ministry for signature

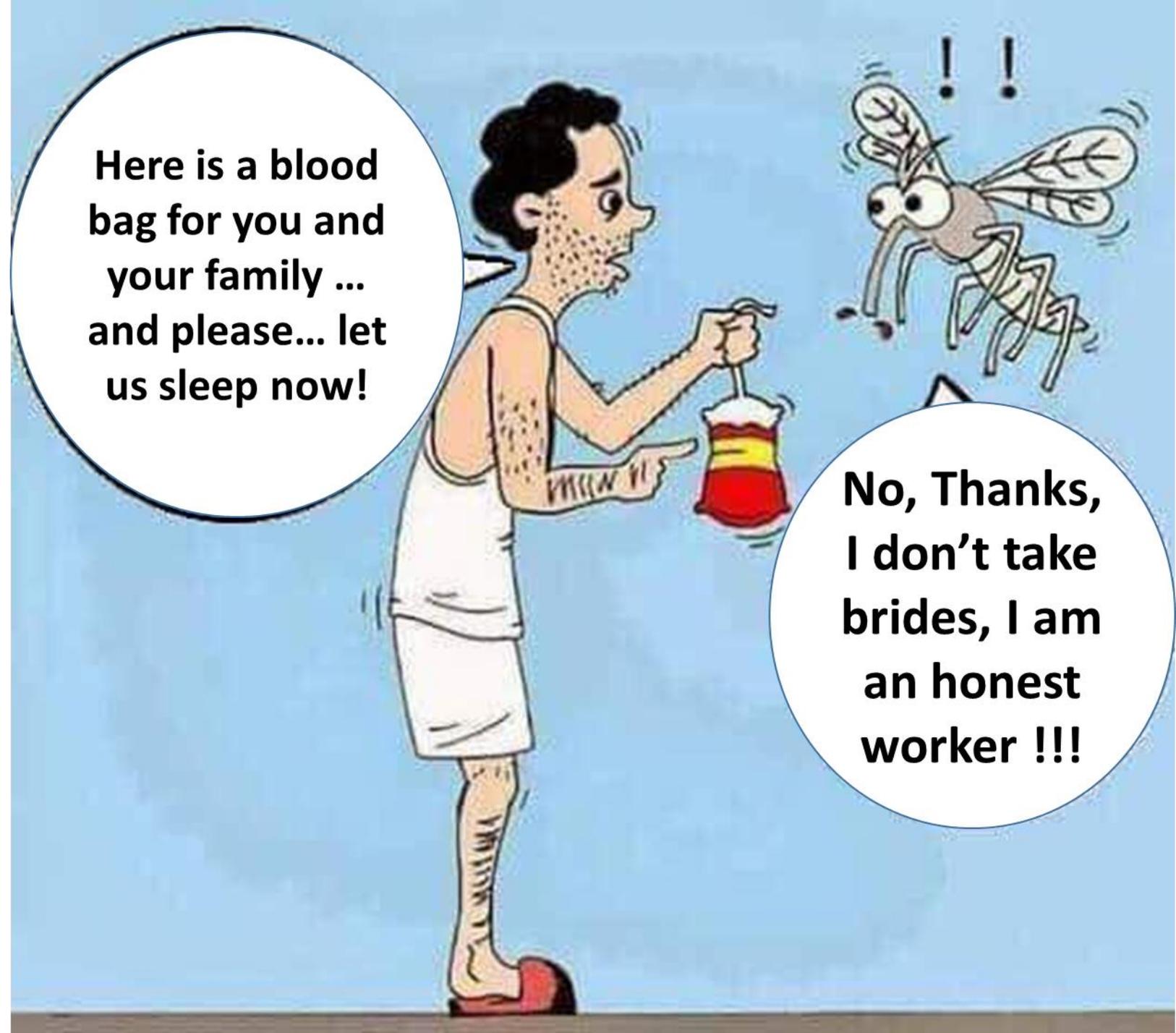
Voices from activists

- TWN (South Africa) : Press Release issued by African Centre for Biodiversity, Third World Network and GeneWatch UK, Johannesburg, 12 February 2018
- COPAGEN « Coalition for the protection of african genetic patrimony »
- Partnership for agroecology (COPAGEN + other NGOs)
- Held meetings where the press is invited (may 2018, INADES Formation)
- Lately (2nd June, 2018) : street demonstrated, petition handed over to an official of the Ministry of Agriculture
- Asking for a moratorium on GMO
- Tried to engage the villagers for not accepting the trials

Dealing with the issue

- OFAB meeting with some parliamentarians on GM technology (including GM mosquitoes and applications in agriculture) & Biosafety regulation
- Invitation of the researchers and the NBA to the President's office to discuss the issue

**Thank you for
your attention**



Here is a blood bag for you and your family ... and please... let us sleep now!

No, Thanks, I don't take brides, I am an honest worker !!!