

RESAMAD

RESeau des laboratoires A MADdagascar

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des racines pour la vie



roots for life



Madagascar



Malagasy population is around 24 million of people,
42% is less 15 years old
Life expectancy is 65 years

Almost 75% of the population is living under the poverty line

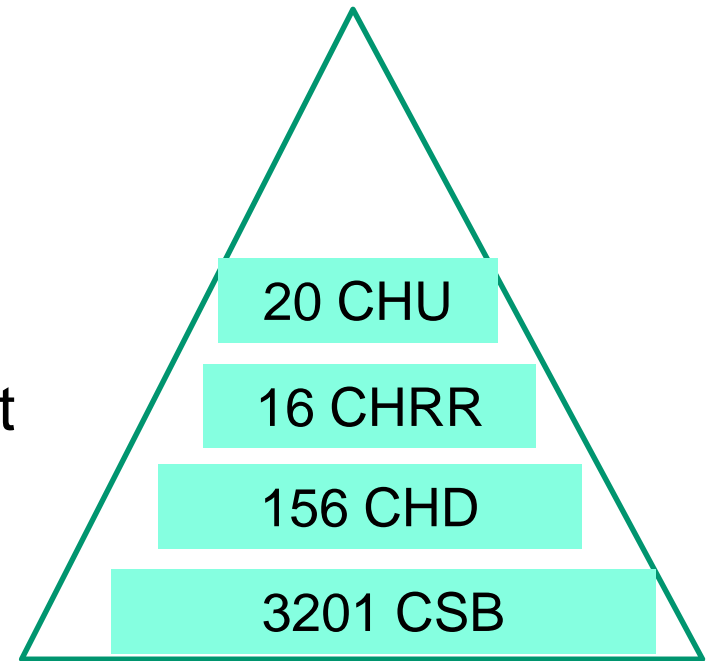
30% of deaths are due to preventable diseases, of infectious origins



Health system

Poor Sanitary conditions
Low access to health care

Especially in rural areas,
Health Centers are far away and not
easily accessible



Lack of medical staff, 1.6 general practitioner
per 10000 people (WHO 2015)



Biology Laboratory

Low sanitary impact regarding clinical laboratories

Laboratories lack material and human resources in order to ensure good laboratory practice of basic biology examinations



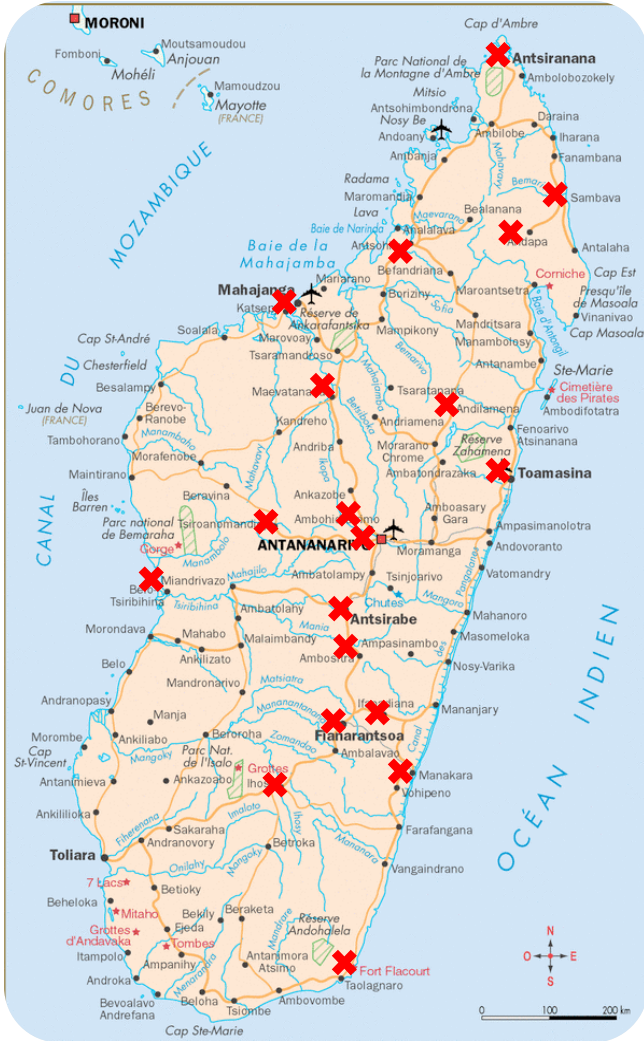
Implementation of RESAMAD

Supports from Fondation Mérieux:

- ▶ Provide technical support for the implementation of basic medical biology examinations for the diagnosis and surveillance of infectious diseases
- ▶ Ensure the training of staff
- ▶ Strengthening the quality of healthcare to the populations



Network : 22 laboratories



Diego Suarez
Sambava
Adapa
Antsohihy
Majunga
Maevatanana
Ambatondrazaka
Tamatave
Tsiroanomandidy
Anosiala

Antananativo (HUMET,
HJRA, HJRB, Ambohimandra)
Antsirabe
Morondava
Ambositra
Fianarantsoa
Ifanadiana
Manakara
Ihosy
Tulear
Fort Dauphin



Pilot project

Bacteriology unit

Befelatanana

University Hospital laboratory



Definition of the project

Context and problematic in the befelatanana laboratory before 2015:

- ▶ Very low activity
- ▶ <5% of positive cultures
- ▶ No transmission of results
- ▶ Lack of management
- ▶ Lack of budget for the daily activity



Bacteriology units, functional

Strengthening the quality of care provided to
populations

► Proximity laboratories for an efficient microbiological
diagnosis contributing to better patient care



Bacteriology Units, sustainable

Set up of a new management system including a
cost recovery system :
Autonomy model

- ▶ ensure business continuity
- ▶ avoid disruptions in the supply of reagents and consumables
- ▶ maintenance and/or acquisition of small materials and equipment



Bacteriology Units, sustainable

Set up of a new management system including a cost recovery system :

Autonomy model

- ▶ 80% of the revenues related to the prescription of tests are dedicated directly to the laboratory
- ▶ 20% of the income is allocated to the hospital's overall budget



Establishment of a multidisciplinary management committee to control and monitor the model



Implementation step

The medical bacteriology laboratory was established in the following stages :

Step one:

Project definition,

collaboration between hospital management and
Ministry of Public Health



And their partners:

Fondation Mérieux



Agence Française de Développement.



Implementation step

Step two:

- The laboratory was renovated
- To accommodate a fully functional bacteriology laboratory

bringing installations up to standard : electricity, laboratory benches, wastewater disposal

Installing equipment : microscopes, autoclaves, incubator, biosafety cabinet, centrifuges

Supplies needed for bacteriological analyses



Implementation step

Step three:

▶ Training of the staff

assistance of a young French medical biologist for six months, under the leadership of the Fondation Mérieux

▶ Set up an essential package of bacteriological analyses

▶ Put in place the drafting of standard operating procedures

As a result, trained biologists and technicians were able to begin their work



Implementation step

Step four:

- ▶ Set up a manual for sampling bacteriological analyses in the laboratory and at the breasts of each clinical department
- ▶ Promot the medical bacteriology laboratory among clinicians and raising awareness about prescribing bacteriological analyses and compliance with pre-analytic steps
- ▶ Launch of routine bacteriological analyses



Implementation step

Step five:

- ▶ Strengthening of clinical and biologic collaboration on antibiotic stewardship (therapy advice, the right prescription)
- ▶ Raised awareness of hospital hygiene and how to prevent the transmission of multi-resistant bacteria through workshops and multidisciplinary meeting

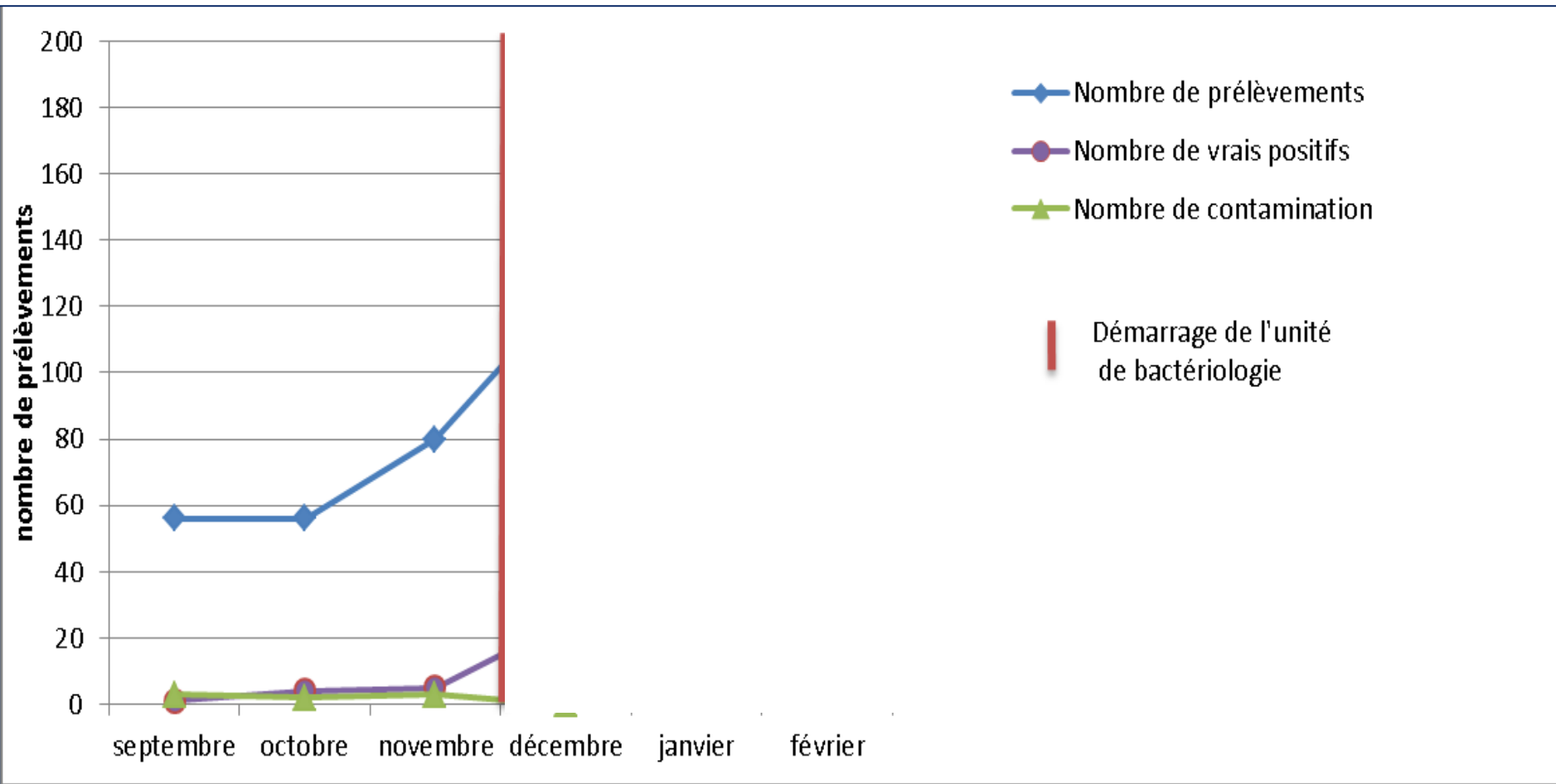


Results

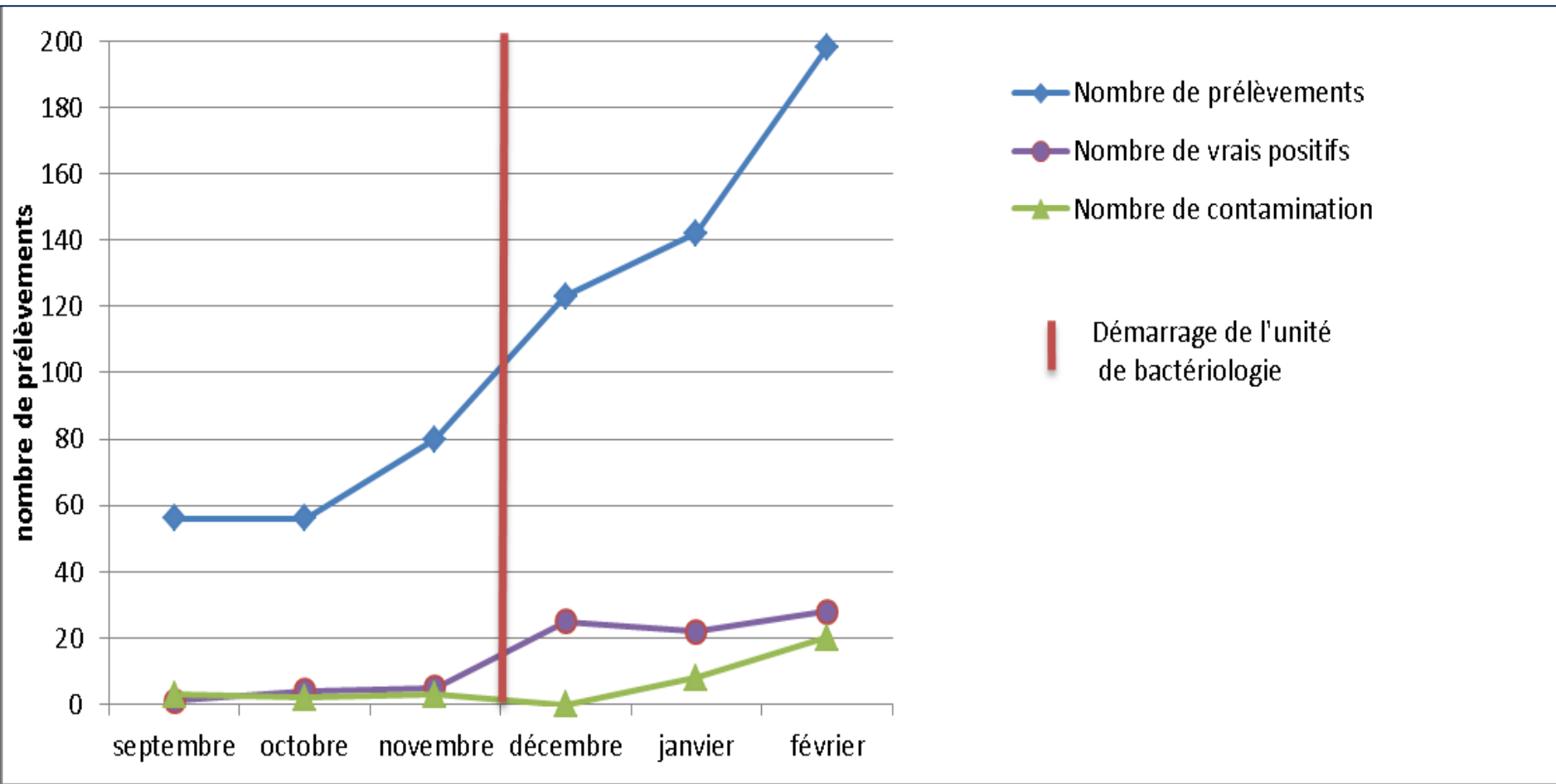
Impact of setting up the bacteriology unit



Activities



Activities

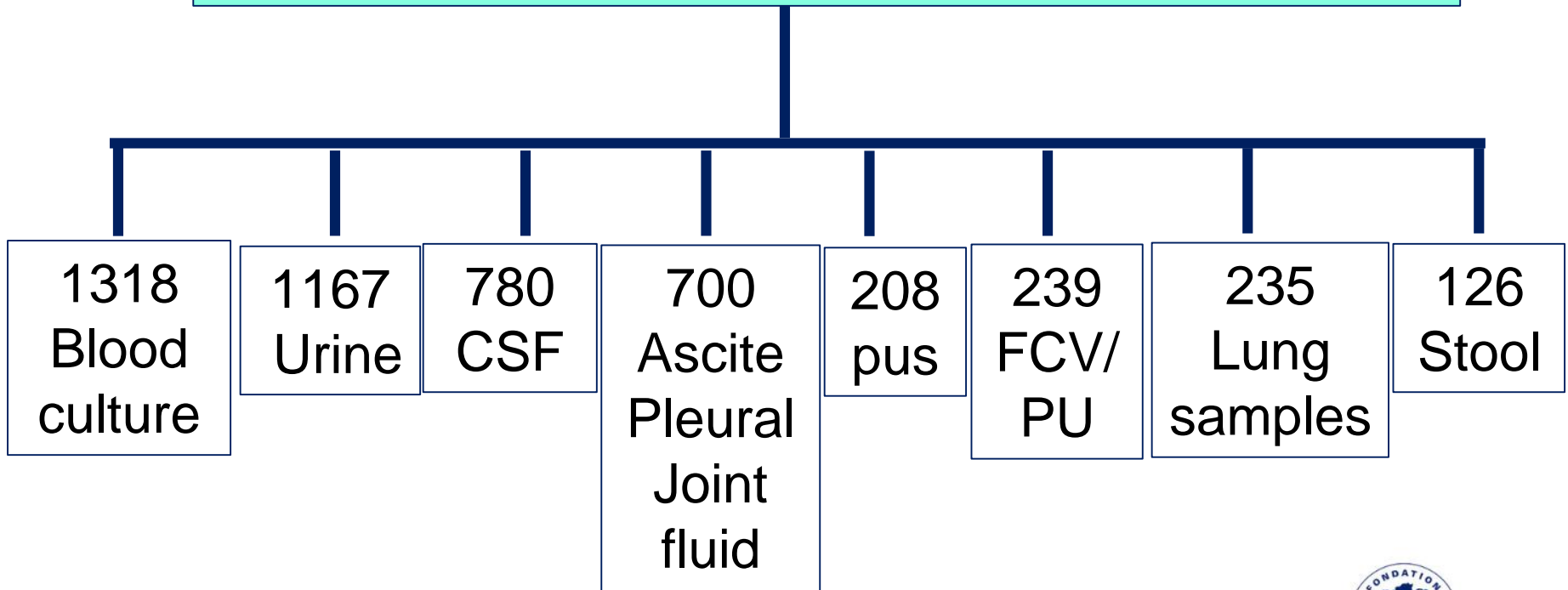


Activities

December 2015 – March 2018

Panel of proposed exams

4773 Samples processed by the laboratory



Financial report for the laboratory's activities

December 2015 – March 2018

	TOTAL	80 % (for the laboratory)	20 % (for the hospital)
Revenues (in euros)	40,590,66	32,472,52	8,118,13
Total expenses (in euros)	29,790,47	24,804,26	4,986,21
Available funds (in euros)	10,800,18	7,668,26	3,131,91

(Oanda exchange rate: 1 euro = 3,960 ariary)



Networking the project RESAMAD Bacteriology units



Bacteriology Units

Antananarivo

CHU JRB

CHUMET

CHU JRA

CHU Anosiala

CHU Ambohimandra

CHU PZAGA Majunga

CHRR Antsirabe

CHRR Ambatondrazaka

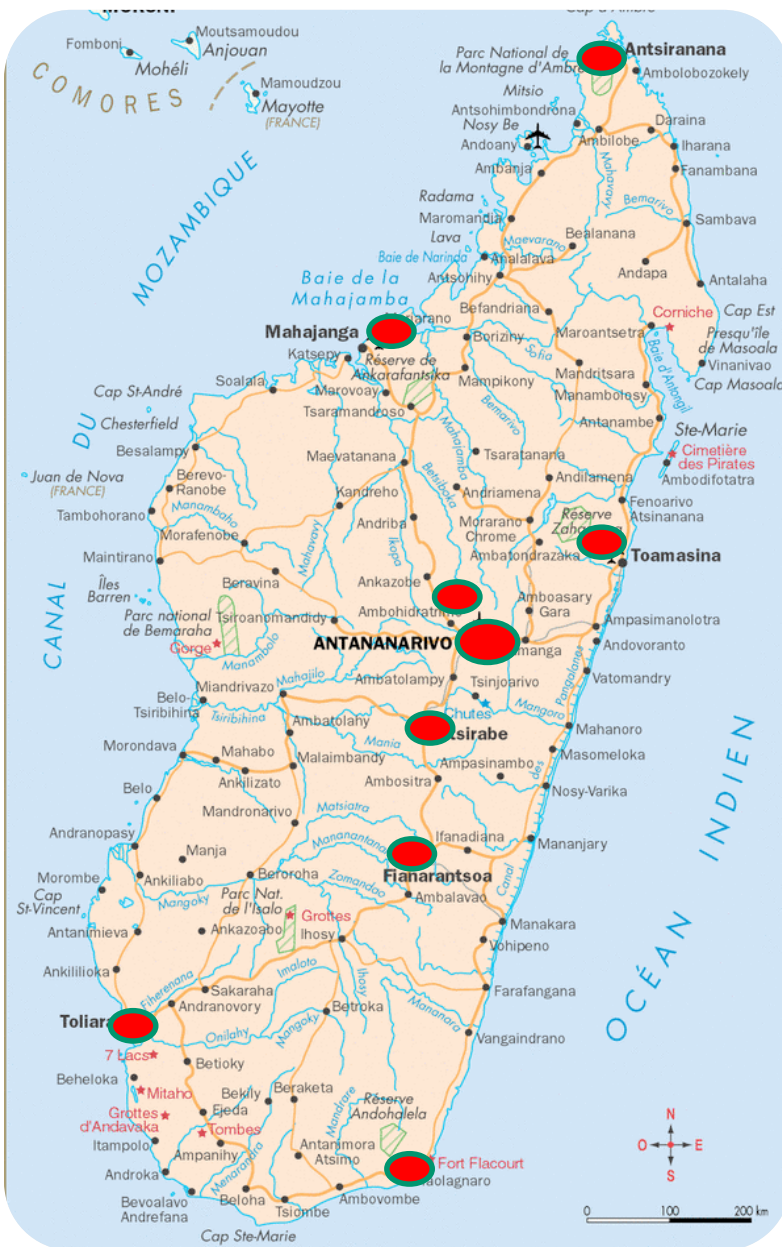
CHU Morafeno Toamasina

CHU Andrianjato Fianarantsoa

CHU Mitsinjo Betanimena Tulear

CHU Antanambao Diego Suarez

CHRR Fort Dauphin



Network dynamics and valorisation

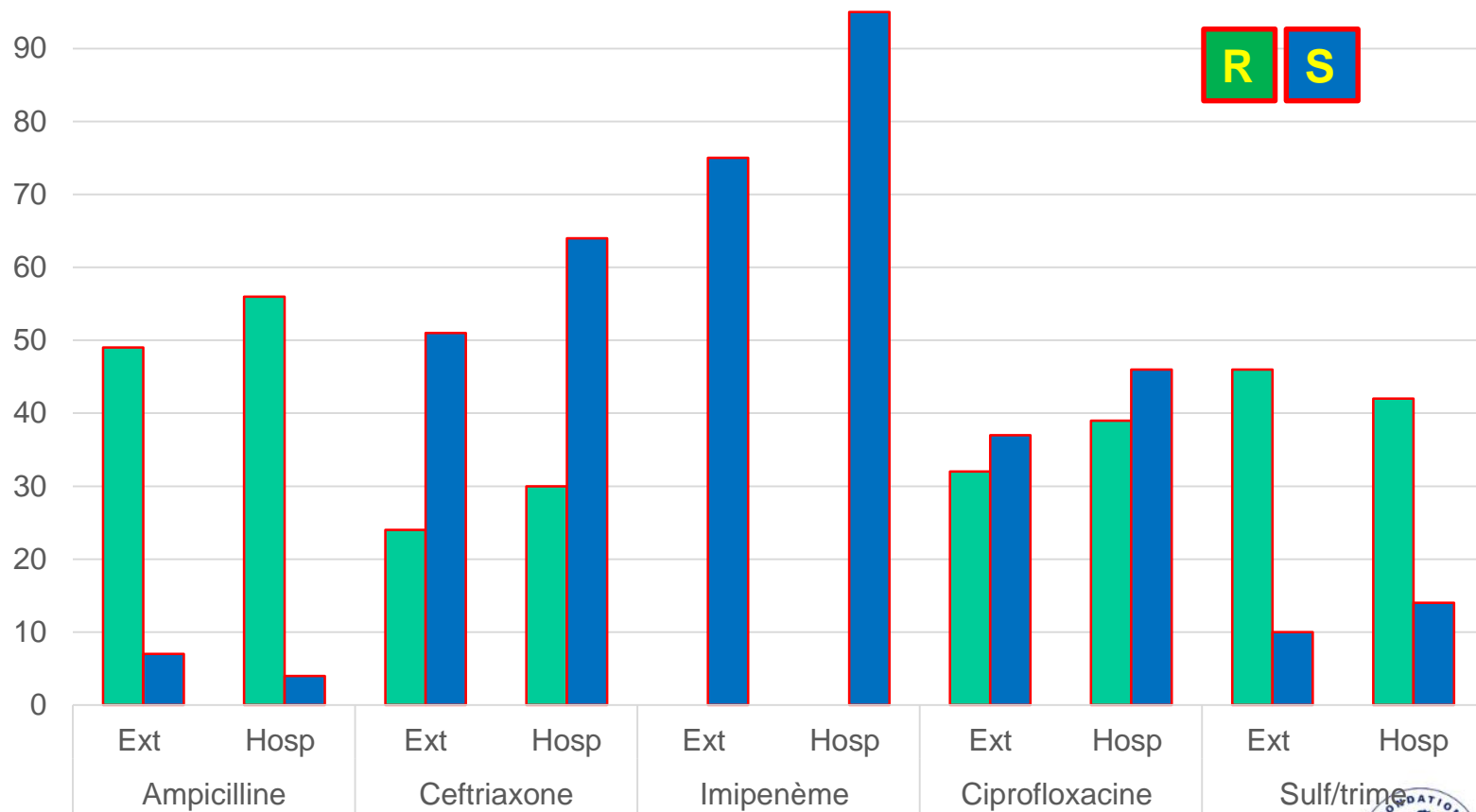
Capacity to implement projects at the country level

- ▶ First data generated, in particular to feed the GLASS surveillance project (WHO)
- ▶ In collaboration with DVSSE, as part of the National Action Plan against AMR
- ▶ Monitoring of a multidrug resistance indicator (E. coli BLSE) with a "one health" objective, Tricycle project (WHO)



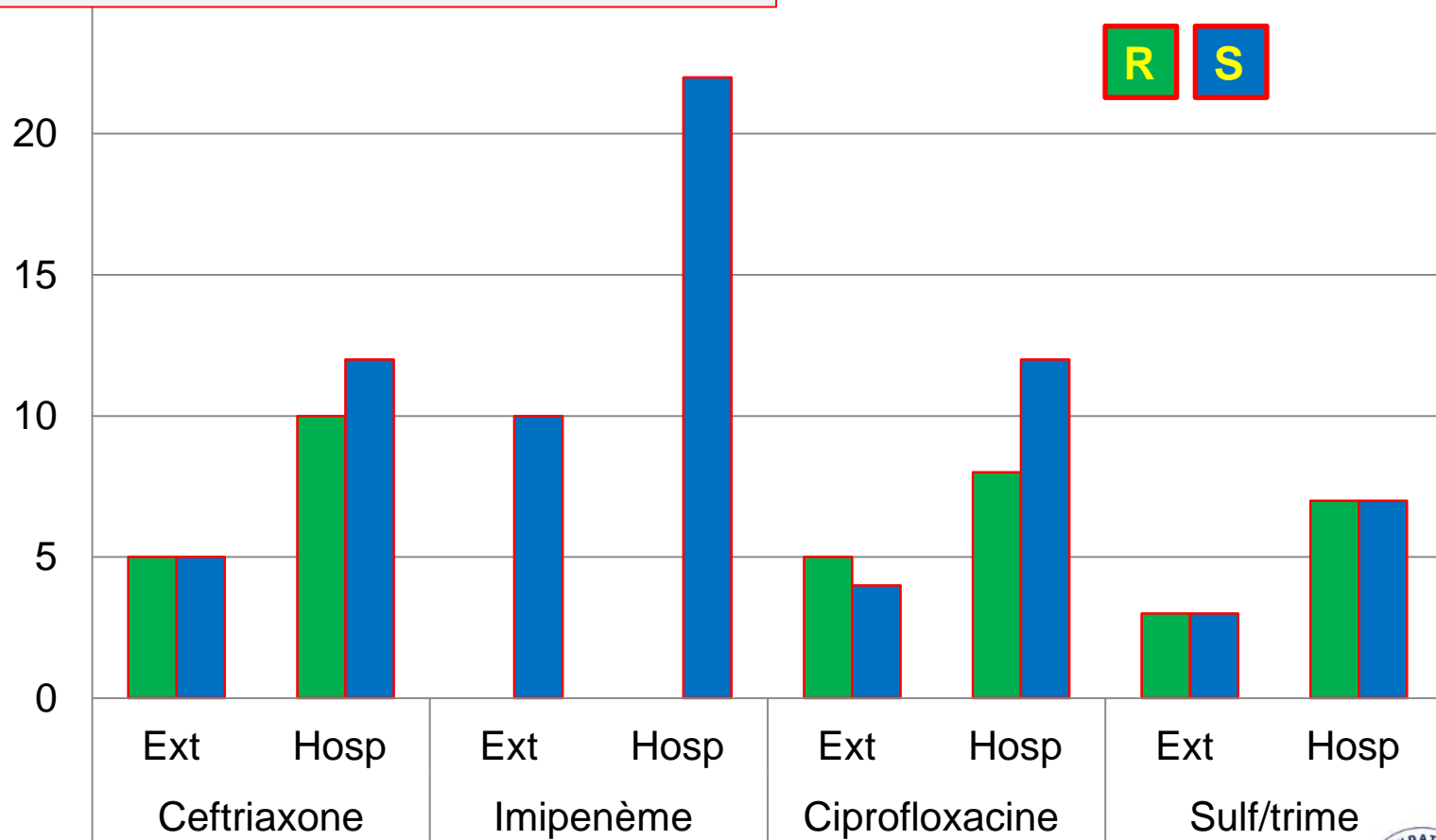
Preliminary Results

E. coli/Urines N = 173



Preliminary Results

***K. Pneumoniae* / Urines N=32**



Conclusion

- ▶ Allows to harmonize practices
- ▶ Allows to share orders with reagents and consumables
- ▶ Allows to develop responsiveness and the implementation of concerted responses
- ▶ Strengthening the quality of care provided to populations
- ▶ Allows to share expertise
- ▶ Carry out inter-laboratory controls



Thus becomes an essential element of performance in the health system



Remerciements



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RESAMAD**

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Dr JI Machuron**

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DPLMT
DVSSE**



Misoatra tompoko !

