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MULTI-ARM IRS-ITNs COMPARISON IN THE DEMOCRATIC REPUBLIC OF CONGO

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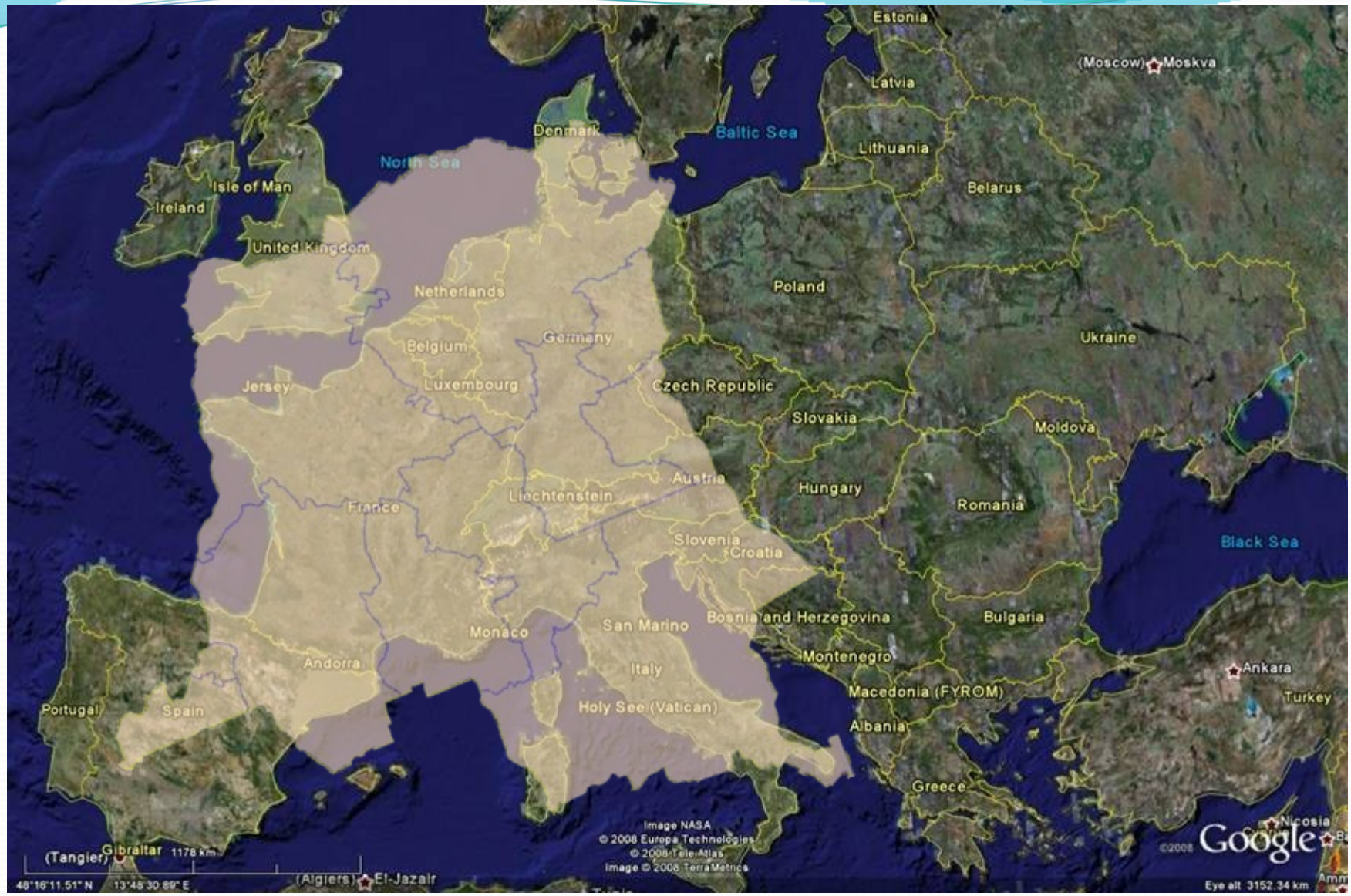
Work done under the auspices of the *Alliance pour la Recherche Clinique et Epidémiologique en RDC* (ARCEAU)

Study site

- TBD within a radius of 200 Km from Kinshasa
- Accessibility / feasibility
- High malaria incidence rates at baseline
- Relatively low coverage with LLINs (DL and IRS groups)
- Collaborative local health services and health system
- Support by National Malaria Control Programme
- GLP-level laboratory available in Kinshasa (through ARCEAU)

A. Toko
UNICEF

- Area: 2,345,409 km^2 (4 times the size of France)
- Population of 70 million
- Second most malarious country in the world
- Renewed malaria control efforts since 2008 (GFATM, WB and soon PMI)


Estonia
(Moscow) Moskva
Latvia
Baltic Sea
Denmark
North Sea
Lithuania
Belarus
Isle of Man
Ireland
United Kingdom
Netherlands
Poland
Belgium
Germany
Ukraine
Jersey
Luxembourg
Czech Republic
Slovakia
Moldova
Austria
Hungary
Liechtenstein
France
Romania
Slovenia
Croatia
Black Sea
Monaco
San Marino
Bosnia and Herzegovina
Bulgaria
Andorra
Montenegro
Ankara
Italy
Macedonia (FYROM)
Turkey
Portugal
Spain
Holy See (Vatican)
Albania
Greece
Nicosia
(Tangier)
Gibraltar
1178 km
(Algiers)
El-Jazair
Image NASA
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48°16'11.51" N 13°48'30.89" E
Eye alt 3152.34 km

Four different intervention arms (Cluster-randomized controlled trial):

1. Durable wall Lining (DL) alone
2. Long-Lasting Insecticidal Nets (LLINs) alone
3. Combination of DL and LLINs (“full protection group”)
4. Conventional IRS (insecticide similar to the one used in DL)

The six comparisons that are possible with a 4-arm trial

	DL	LLIN	Combination DL + LLINs	Conventional IRS
DL				
LLIN	X			
Combination DL + LLINs	X	X		
Conventional IRS	X	X	X	

- **Primary outcome**: incidence of documented clinical malaria, assessed by passive case detection (longitudinal study). Follow-up period would ideally be 3 years.

- **Secondary outcomes**: (children under age of 5 years): parasitaemia, mean haemoglobin, prevalence of fever, prevalence of hepato-splenomegaly (repeated cross-sectional studies including a baseline study)

- **Entomological outcomes**: mosquito resting density inside houses, indoor and outdoor biting rate as estimated by CDC light traps (continuous assessment).

Conducted as close as possible to GCP / GLP standards for non-regulatory trials