Global Tricycle Surveillance

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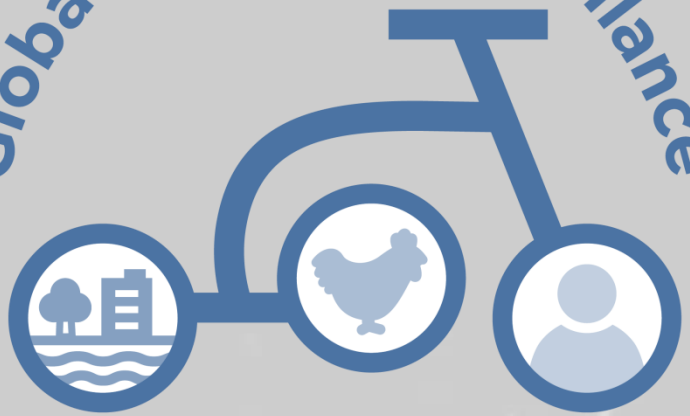
Global Tricycle Surveillance

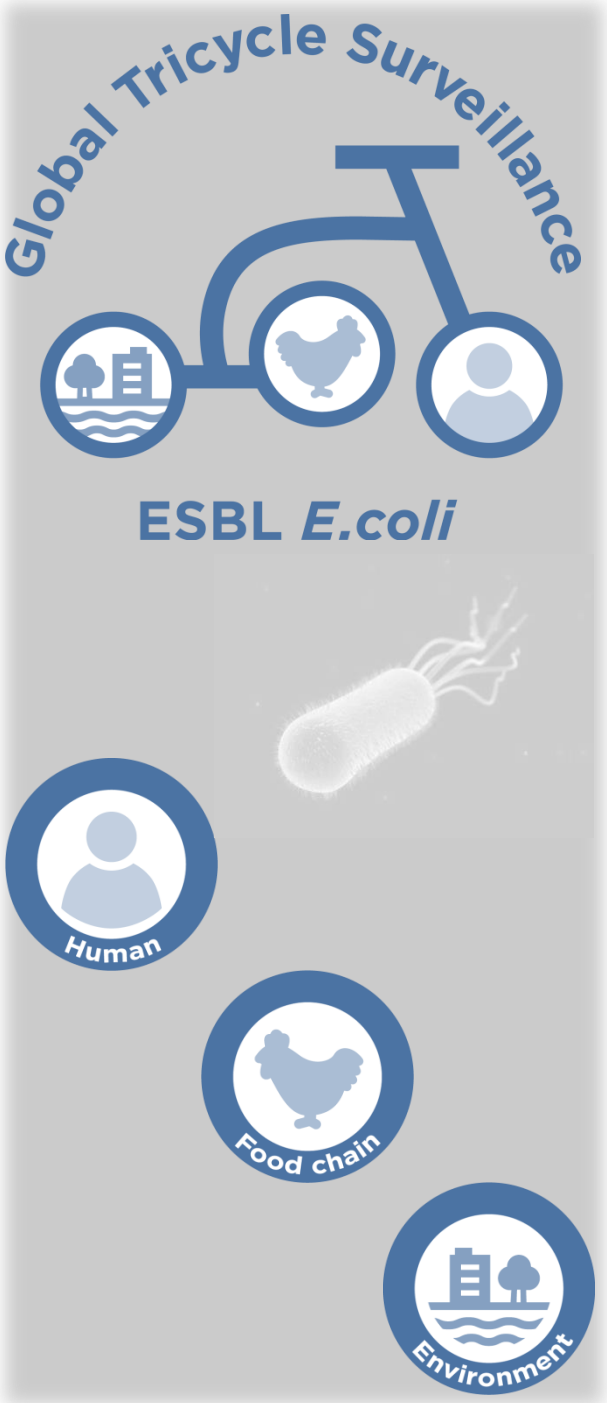


ESBL *E.coli*

Environment

Food chain

Human



ESBL Ec Tricycle project

Background, Rational and goals

World Health Organization

Background

- AGISAR supports WHO to minimize the public health impact of AMR associated with the use of antimicrobials in food animals
- Aims to build national capacity to implement the integrated surveillance of AMR through:
  - Development of protocol, lab modules, guidance document
  - Training courses (1-week long)
  - **Pilot projects** (1 or 2 years long)

World Health Organization

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Specific objectives

- Increased awareness or/and commitment for prevention and control of Food-borne Diseases and containment of AMR
- Better prevention and control of FBDs including AMR along the food chain
- More synergies with other on-going existing initiatives in the country
- Better detection and early warnings
- An ability to identify trends on AMR
- Associations between AMR and drug usage in human or animal sectors

World Health Organization

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Expected outcomes

- Collaboration and communication between human, food and animal sectors
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- Collaboration among regional/international partners (Food and Agriculture Organization (FAO), World Organization of Animal Health (OIE))

National programme on integrated surveillance of AMR

World Health Organization

Human
Food chain
Environment

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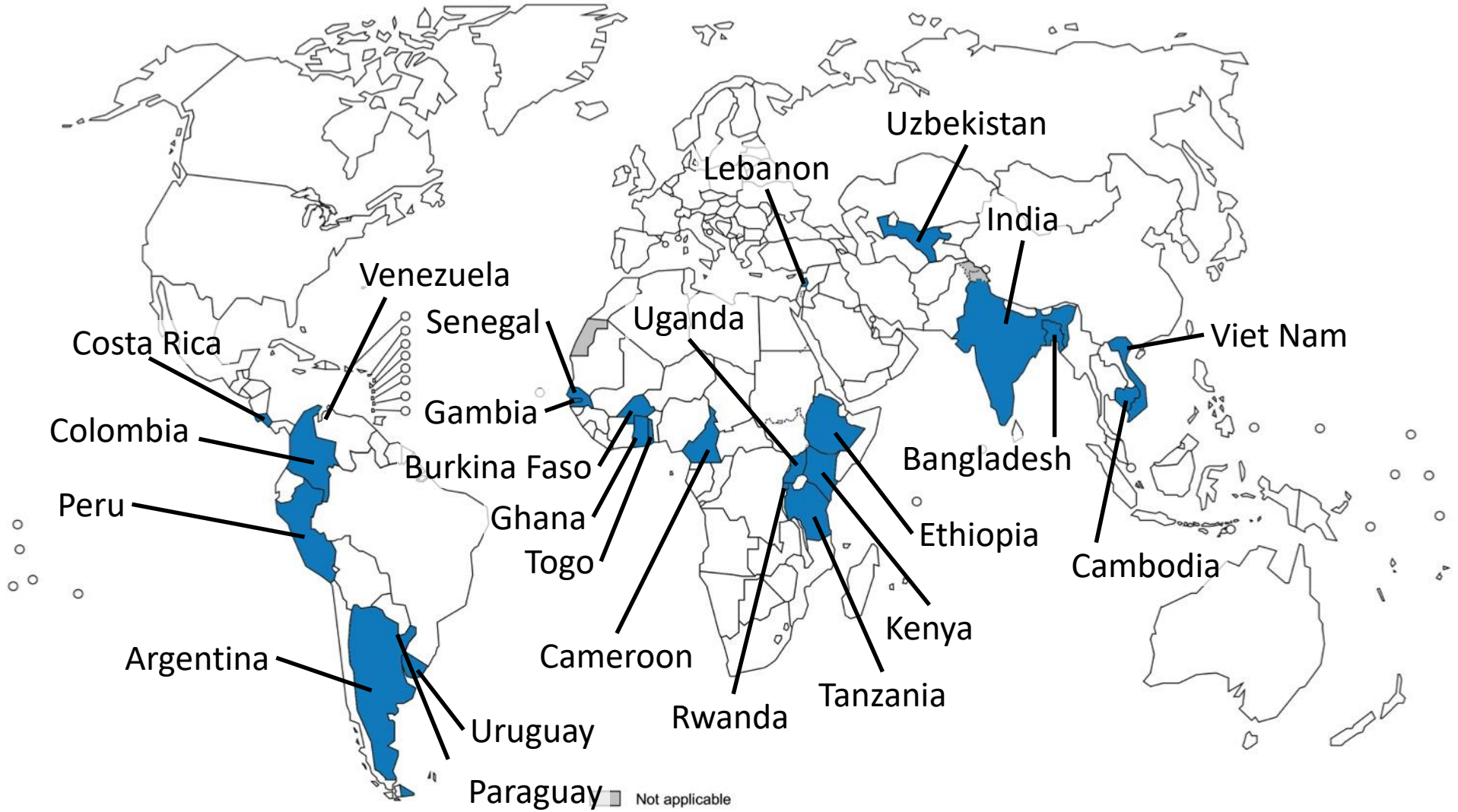
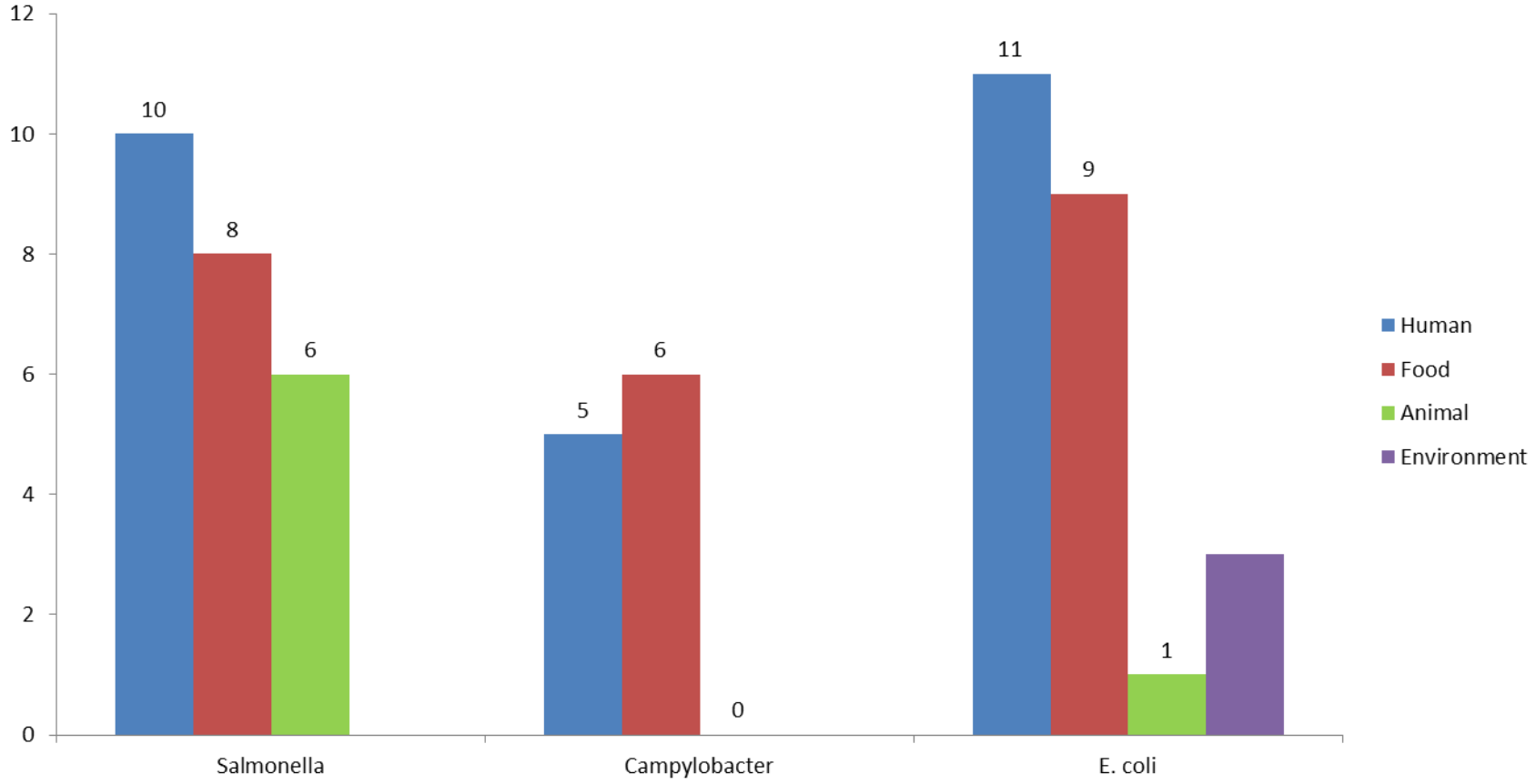
AGISAR projects 2010-2014



AGISAR PROJECTS 2010-2015



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ESBL *E.coli*

GLOBAL ACTION PL
ON ANTIMICROBIAL
RESISTANCE

A MANUAL FOR DEVELOPING NATIONAL ACTION PLANS

Version 1

February 2016

Food and Agriculture Organization of the United Nations

WORLD ORGANISATION FOR ANIMAL HEALTH

World Health Organization

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tivities

From the AGISAR6 report

Important issues raised during discussions included:

- ***Including all relevant sectors in integrated surveillance*** is required to understand the full picture. The role of water, sewage, and soil in maintaining resistant bacteria as a source for animals and people, as well as allowing for contact between different populations of resistant bacteria and possible transfer of genes, was repeatedly noted. Microorganisms from these sources need to be monitored, and contamination controlled. Similarly, antibiotic usage in crops and resistance in plant-derived foods would have to be included in any comprehensive, integrated surveillance plan.

The work that followed among AGISAR experts has end up in :

Concept note
WHO Integrated Global Survey on ESBL-producing *E. coli* using a "One Health" approach - An initiative of the WHO Advisory Group on Integrated Surveillance of Antimicrobial Resistance (AGISAR).

Contributors : Awa Aidara-Kane (WHO), Antoine Andremont (University of Paris-Diderot Medical School), Mark D. Sobsey (Gillings School of Global Public Health, University of North Carolina), H. Morgan Scott (Texas A&M University)

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WHO Integrated Global Survey on ESBL-producing E. coli using a "One Health" approach, "The Tricycle Project"

1st Meeting for ESBL E. coli Project Protocol Development

North Carolina, October 18-19, 2016

ESBL Ec Tricycle project: protocol development

Simple surveillance across the three main sectors

Simple microorganism and resistance mechanism as indicator

ESBL *E. coli*

Human

Food chain

Environment

Timeline: 3 years (2016-2019)

World Health Organization

Objectives

- To establish an Integrated Surveillance System to monitor ESBL producing E. coli in three main areas, human, food chain and the environment across Member States
- To establish a simple and standardize methodology to isolate and monitor ESBL producing E. coli
- To compare the prevalence of ESBL Ec in each or the 3 areas among Member States and
- To develop effect of intervention

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ESBL *E.coli*

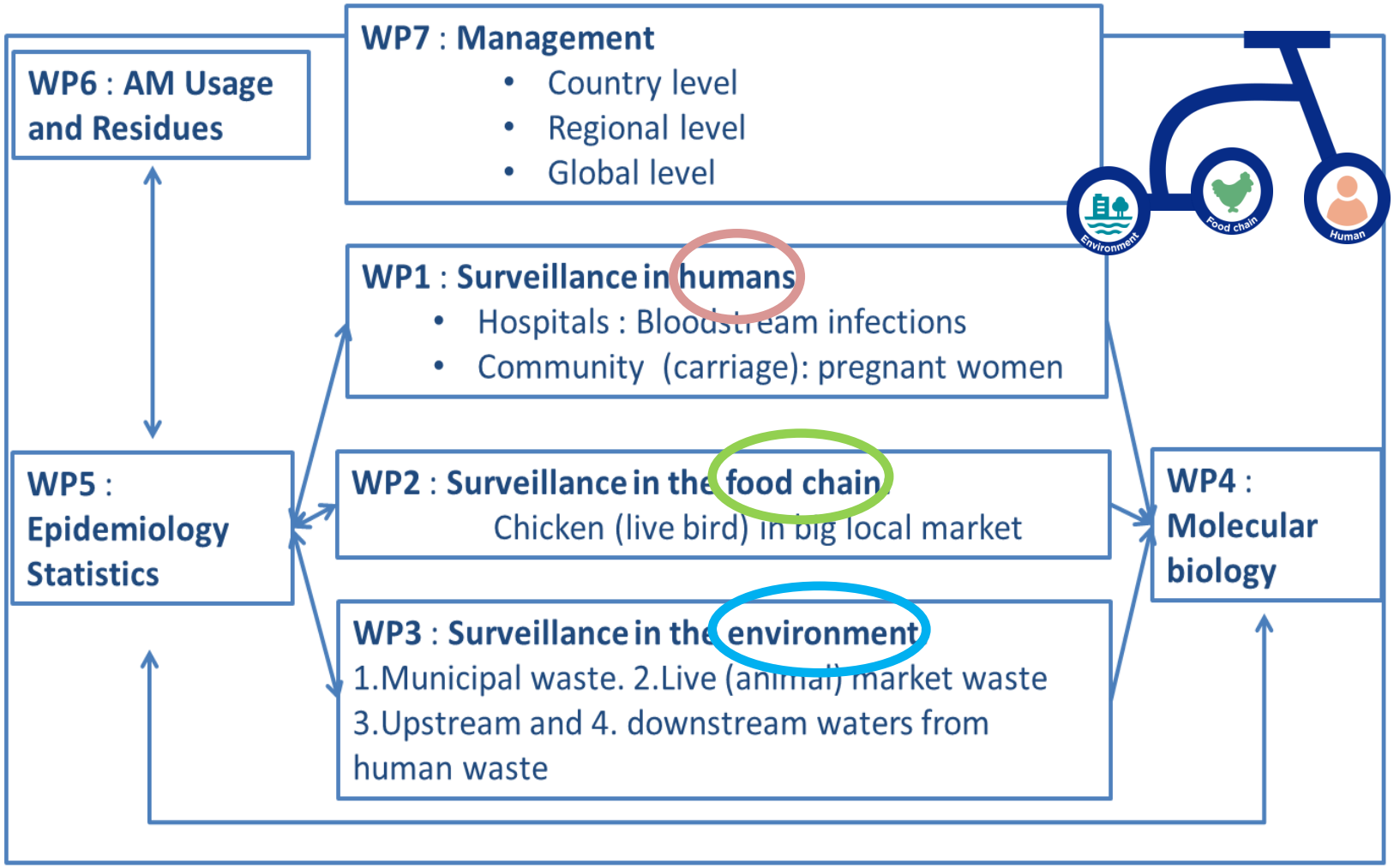

Figure 1. ESBL Ec Tricycle project.
WP Working Package

Methodology

Sector	Sitio	Sample subject	Sample	No.Samples	Detection met
Human	Hospital	Inpatient	Bacteremias	5000 blood cultures/year	Routine method
	Community	Pregnant women	stool/rectal swab	100	MacConkey+CTX*
Animal	Market	Chicken	Cecal	240 20/month	MacConkey+CTX
Environment	Capital/Biggest city	Communal sewage	Waste water	6-8 rounds per year 4 samples per round 2 cities (suggested) Total 48-64 samples a year	TBX/TBX +CTX
		Market sewage	Waste water		TBX/TBX +CTX
		River Downstream	Water		TBX/TBX +CTX
		River Upstream	Water		TBX/TBX +CTX

*MacConkey+CTX: 4ug/ml

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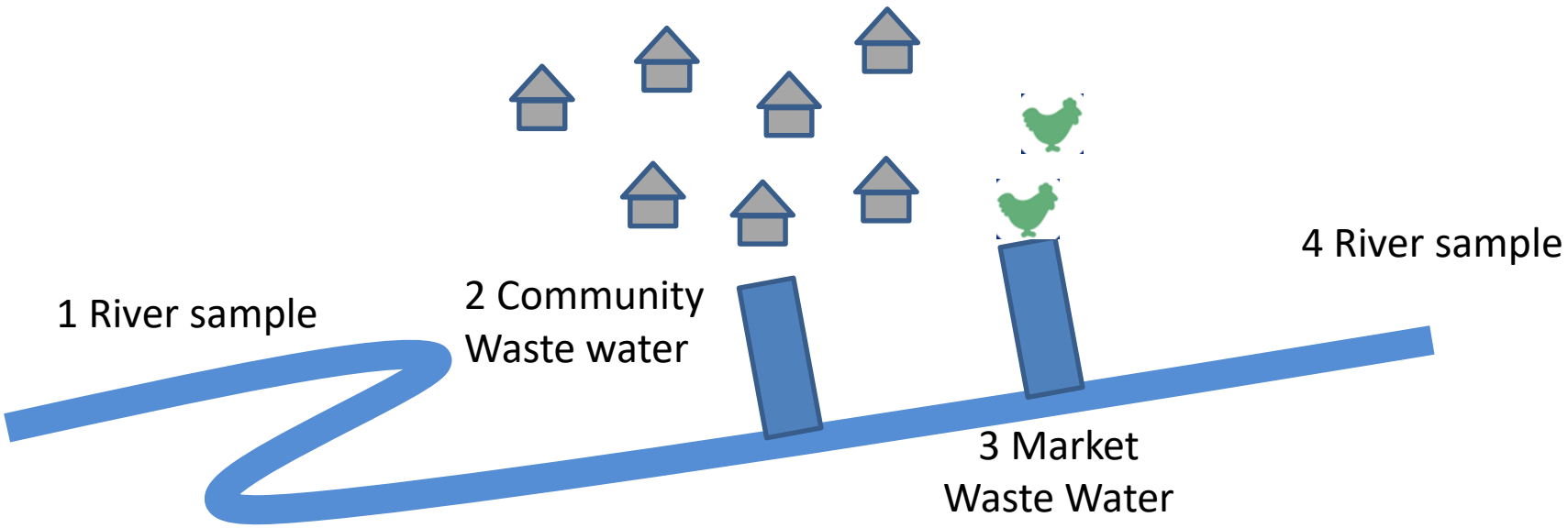
Tricycle – environmental sampling

- Two cities: capital city and sentinel city 100 000 people
- Concentration of E coli and % ESBL Ec



Numbers of Samples: 2 cities x 4 muestras x 6-8 rounds/year= 48-64

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Country implementation

- Training workshop for countries from AFRO, EMRO, SEARO and WPRO
- Established a List of Minimal, technical and supportive requirements
- Countries enrolled and implementing the pilot phase

Region	Final Selection
AFRO	Ghana, Senegal, Madagascar
EMRO	Pakistan
SEARO	Indonesia
WPRO	Malaysia

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Human
Food chain
Environment

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Countries joining

- There are additional countries planning to be part of the pilot phase in 2018

Region	Final Selection
AFRO	Zimbabwe, Zambia
EMRO	Jordan
AMRO/PAHO	Costa Rica, Paraguay
SEARO	Bangladesh, India, Sri Lanka, Thailand

THANK YOU


Human
Food chain
Environment


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