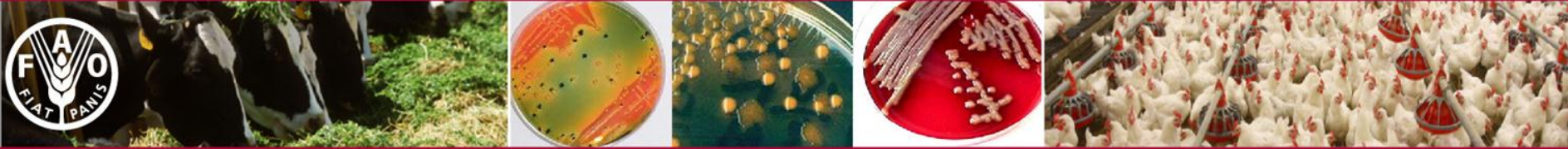




FAO and Tripartite Antimicrobial Resistance Activities

Patrick Otto

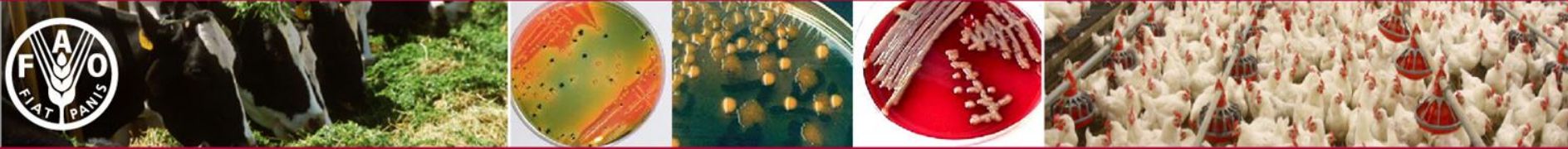
*Animal Health Officer (Veterinary Public Health
Animal Production and Health Division)*



FAO mandate and mission



- 190 Member nations + 1 Member Organization (EU)
- defeat hunger, raise levels of nutrition;
- a source of knowledge and information – ‘turning knowledge into action’
- modernization/improvement of agriculture, forestry and fisheries, and management of natural resources;
- ensure food and nutrition security for all.
- FAO Hqs (Rome), Regional, sub-regional and country offices



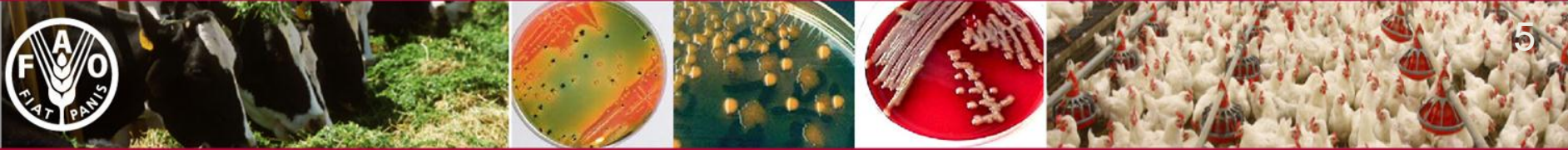
Why AMR matters to FAO

1. Antimicrobial drugs are important resources for both human and animal health;
2. Animal health is critical for the livestock sector - re;
 - Household nutrition and food security
 - Household income – esp. for livestock dependent communities
 - Economic development – up to 40% of Agriculture GDP
 - Global food security
3. Public health: emergence and spread of AMR – has impacts on production and productivity;
4. Trade/access to markets;

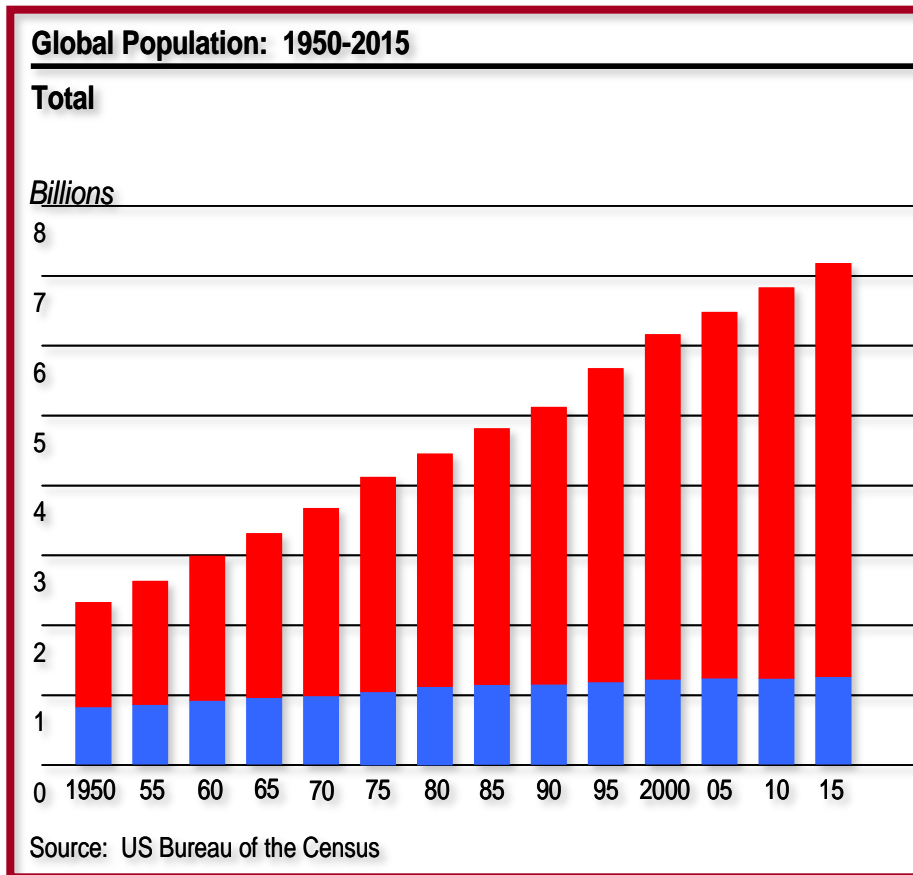




Global Trends and Contexts



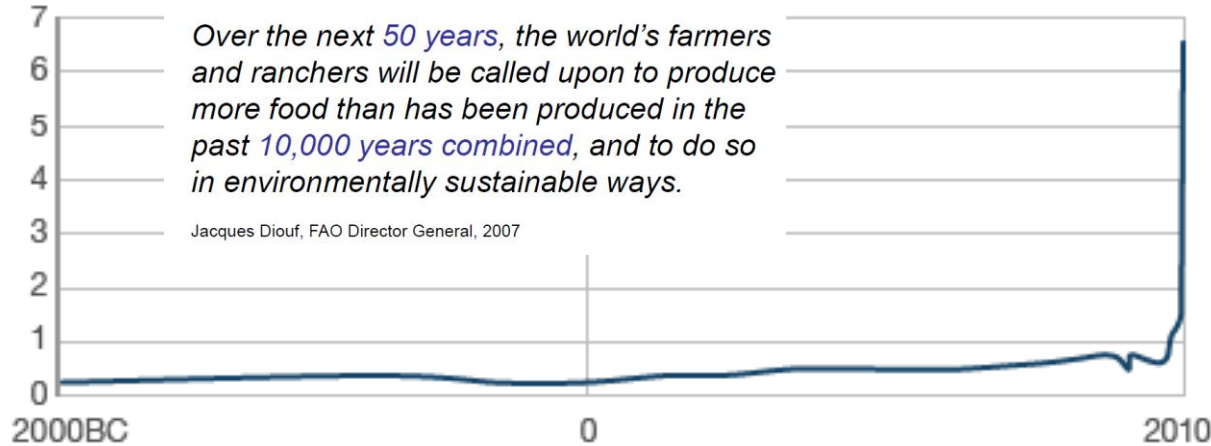
Global demand for food security



- +30% since 1990
- +30% or 9 billion people by 2050
- Demand for animal protein, notably milk and eggs will increase by more than 50%
- Focus on developing / transition countries –
- shift in production of FOAO from N America and Europe to developing and in-transition countries – (1960 NA & Europe – 40%; Now approx. 19%)



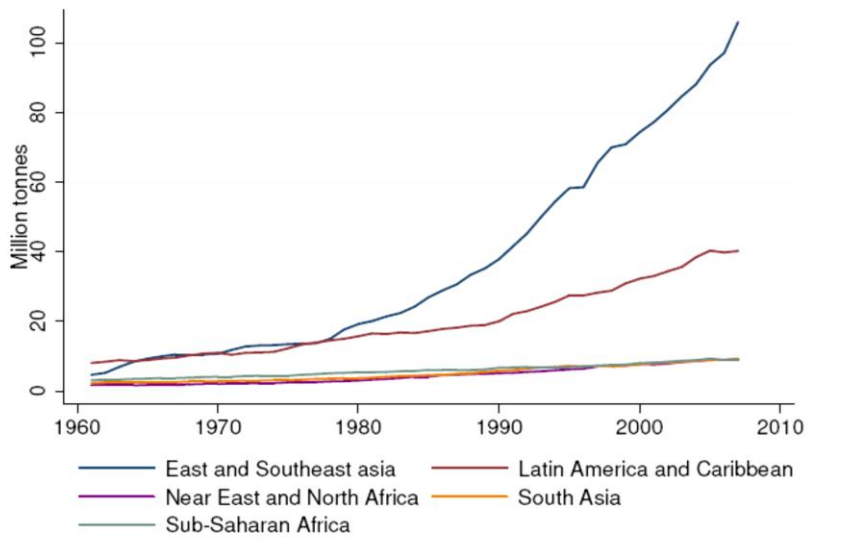
Billions



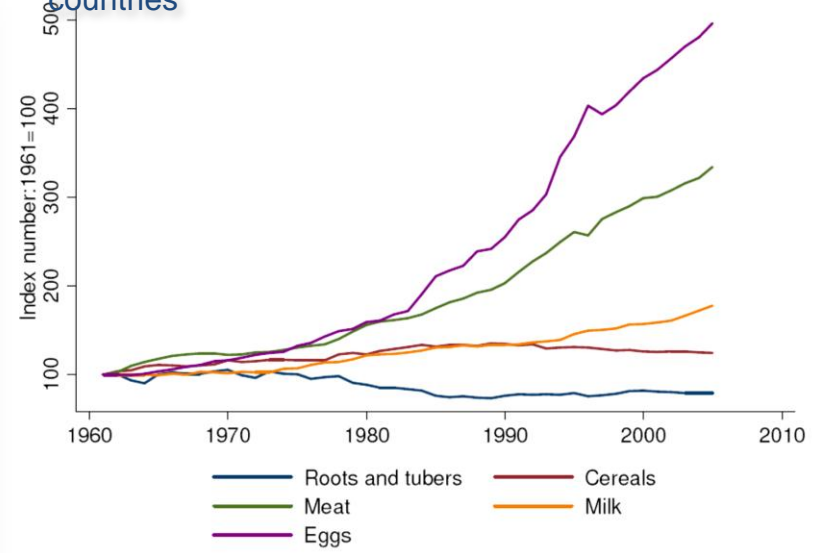
World demand for livestock food products since 1990:

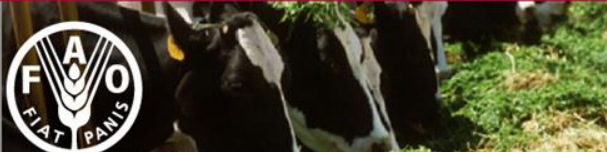
- Milk +30%
- Meat +60%
- Eggs + 80%
- **+70% by 2050**
- Intensification

Meat Production – Developing Country Regions

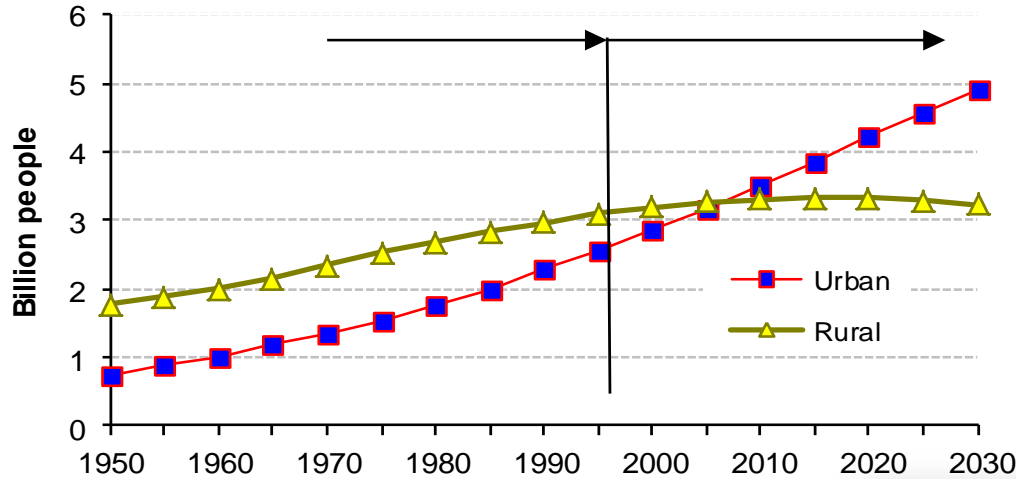


Per capita consumption of major food items in developing countries





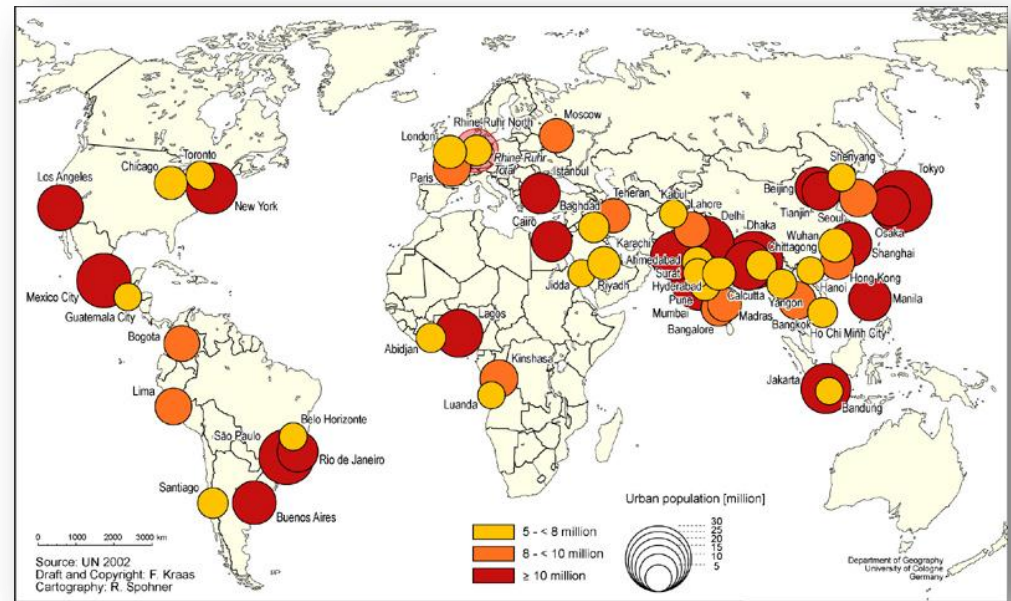
Urbanization



20% in 1900,

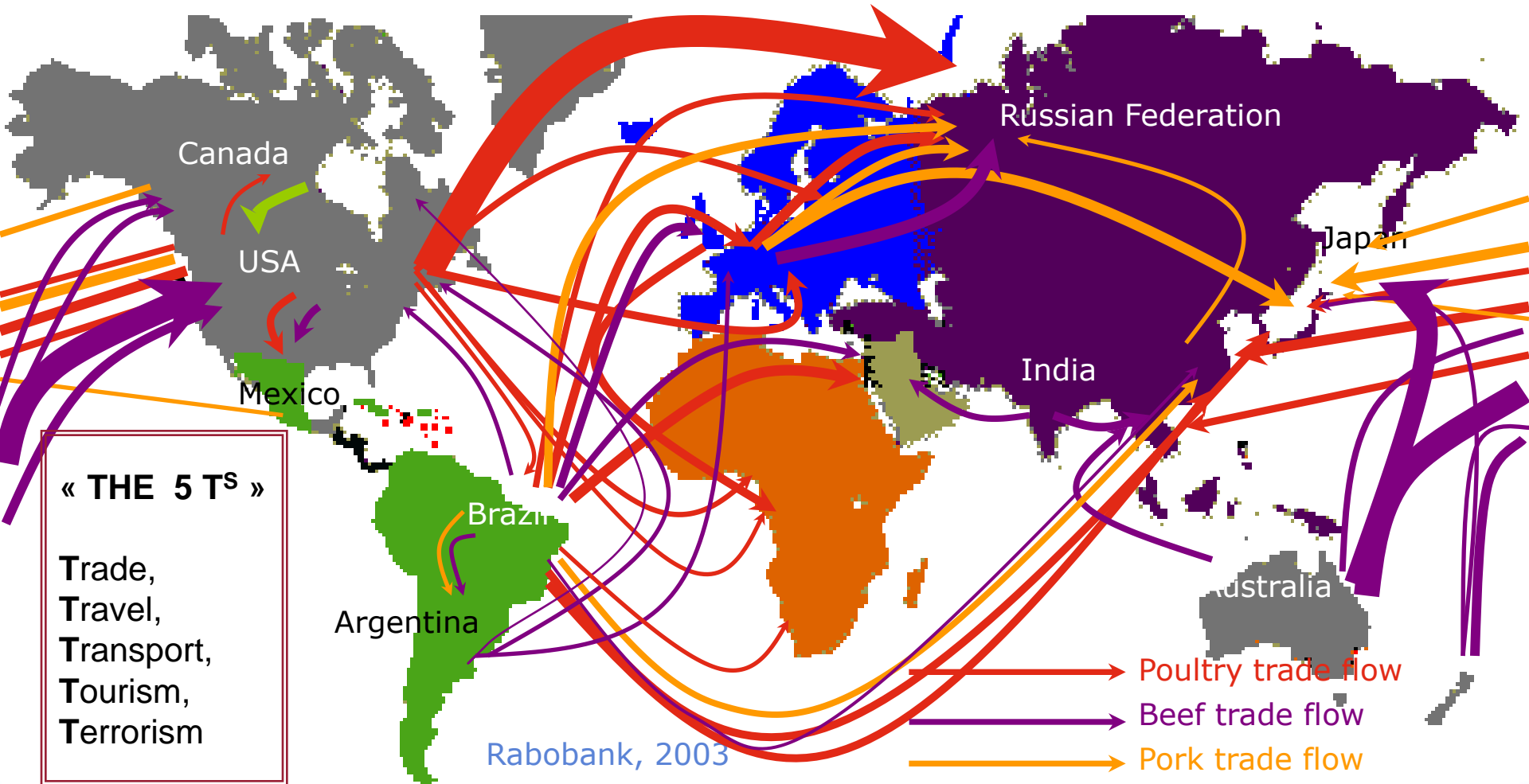
>50% in 2010

70% of people will be urban in 2050



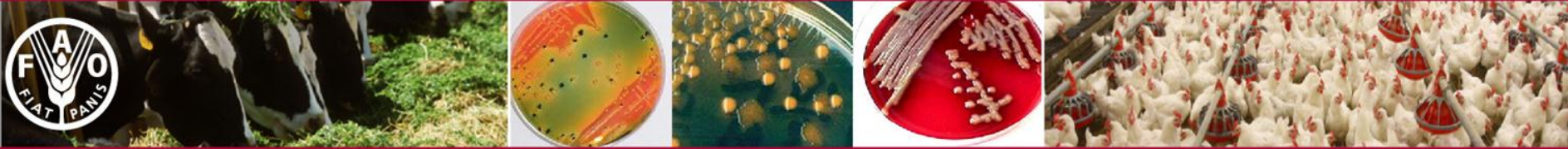


Globalisation – Trade in animal sourced food





FAO AMR activities



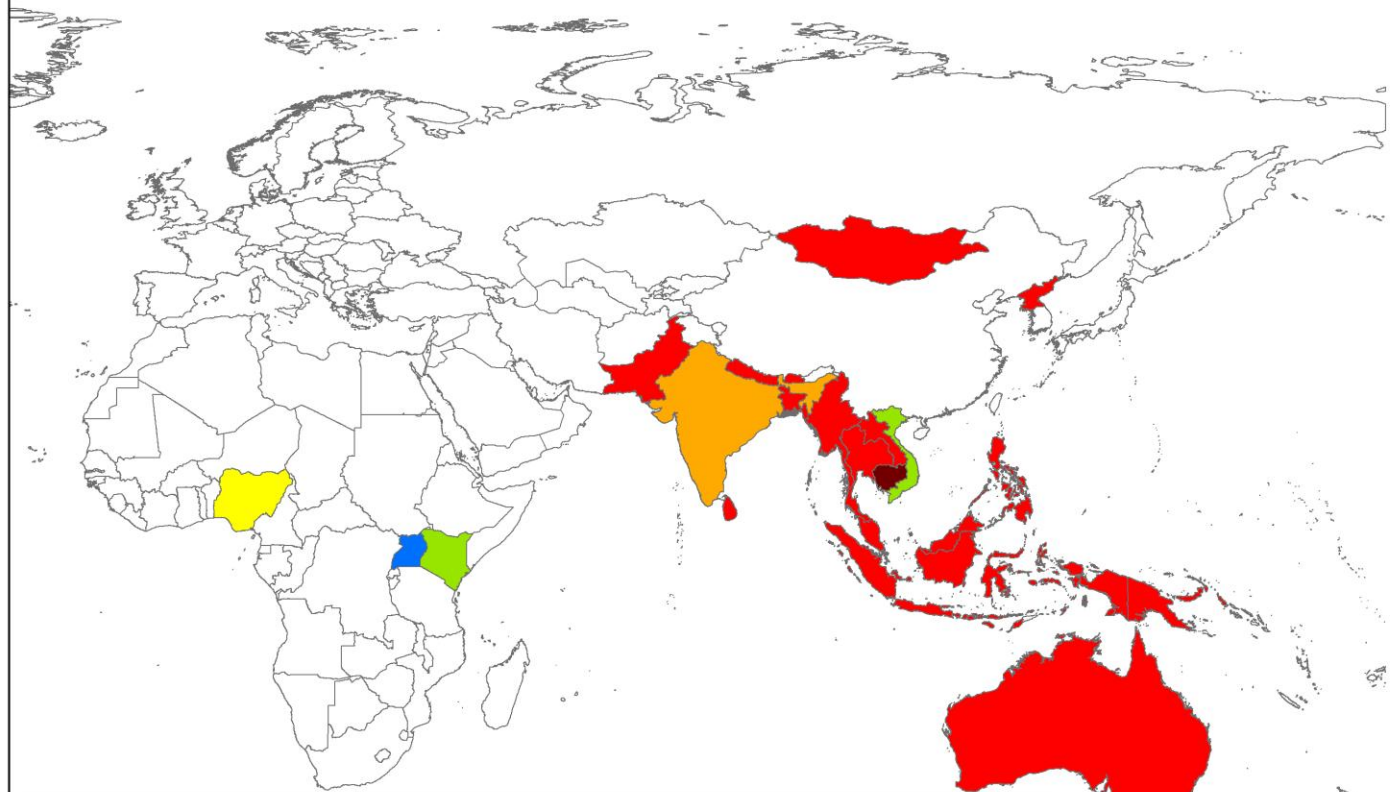
FAO AMR Capacity Building Initiatives

Policies - Institutional & technical capacity development – Support/advice

1. Country level AMR surveillance and AMU monitoring activities - (FAO and international partners)
2. Policy, technical capacity development and advice to value chain operators and stakeholders;
3. Laboratory capacity development;
4. Regional activities e.g. APHCA;
5. FAO/Codex Guidelines & CoP;
6. FAO/OIE/WHO Tripartite Initiatives

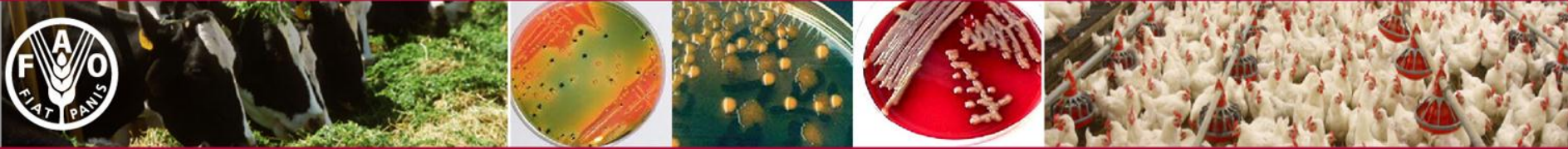


FAO activities on Antimicrobial Resistance (AMR)



Activity type:

AMR laboratory capacity development	APHCA linked and Ongoing AMR surveillance
APHCA linked	Ongoing AMR surveillance and laboratory capacity development
Ongoing AMR surveillance	No Activities
Planned AMR surveillance projects	



Capacity Development for AMR surveillance

- **Aim:** to develop national capacities for AMR detection and surveillance; and antimicrobial use monitoring in the poultry, beef, pig and aquaculture value chains.

Key aspects:

- Priority enteric pathogens (*Salmonella spp*, *Campylobacter spp*, *E. coli*, *Vibrio spp.*, *Aeromonas spp.* and *Enterococcus spp*) - detection/quantification in terrestrial and aquatic animal value chains;
- AM susceptibility testing - AMR patterns to commonly available classes of antimicrobials ;
- to establish critical points where prevention and control measures can best be applied;

Contribute towards:

- policy development and implementation;
- awareness and good practices.



Awareness, advice and guidance

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CHICKENS

It is very important to keep your chickens healthy to get a good yield from them, whether it is from eggs or meat. Good hygiene is the best way to make sure that your chickens stay healthy and happy - it is also the cheapest.

Good Hygiene

The best way to keep your chickens healthy is to keep up good hygiene practices. These can include keeping different clothes for each different animal so that you don't bring in disease or bacteria from other animals on your clothes.

Another good way to stop the spread of disease is to put a foot bath outside the chicken house. Use this every time you go in or out of the house to stop disease being spread there.

As well as this, keep the house clean and well ventilated. This also means keeping the food and water holders clean and stocked full of clean food and water.

Vaccinating Your Chicks

It is important that you always vaccinate your chicks when they are young. The chicks from KenChie are vaccinated when they leave their hatcheries at one day old, however Kiyeji chickens do not come already vaccinated so you must do it yourself.

Giving your chicks vaccines is important as it stops life-threatening diseases such as Newcastle Disease. The vaccine for diseases such as this can be bought from your local agro-dealer and must be kept cold.

Antibiotics For Your Chickens

It is very important that you only give your chickens antibiotics given to you by your vet. Vets will only give your chickens the right medicine when they are actually sick. If you give your animals medicine they do not need they will build up a resistance to them and then when they really get sick, the medicine will not work anymore.

Chickens who are treated with antibiotics transfer these medicines into the meat and eggs they produce which in turn are eaten by humans. Since humans use the same types of antibiotics as the chickens, we too slowly build up a resistance to them. This can lead to problems if we get ill and cannot be cured.

Chickens and humans share the same medicine so they build up a resistance to them. This is bad for human health.

FOR MORE INFORMATION, SMS 'CHICKENS' OR 'ANTIBIOTICS' TO 30606

FAO FISHERIES AND AQUACULTURE TECHNICAL PAPER 547

Improving biosecurity through prudent and responsible use of veterinary medicines in aquatic food production



Policy engagement – E.g. National Task Force on AMR in Kenya

REPORT ON THE OFFICIAL LAUNCH OF TASK FORCE TO SPEARHEAD ACTIVITIES TO ADDRESS THE DEVELOPMENT OF ANTIMICROBIAL RESISTANCE IN THE MEAT VALUE CHAIN.

VENUE: SAROVA PANAFRIC HOTEL, NAIROBI, KENYA

October 13, 2012
Compiled by: Dr. Catherine Kunyanga

MINUTES OF ANTIMICROBIAL RESISTANCE (AMR) MEETING HELD ON 29TH NOVEMBER 2012 AT THE DEPARTMENT OF VETERINARY SERVICES (DVS) BOARDROOM

In attendance	Organization	Tel.	E-mail
Dr. Allan Azegele	DVS/VPH	0722968989	ae-allan@yahoo.com (Chairing)
Dr. P.N. Karitu	DVS/ZDU	0722226790	jpnkaritu08@yahoo.com
Dr. J.N. Kiiru	KEMRI	0721805285	indemi@yahoo.com
Dr. G. Njihia	DVS/ZDU	0733464170	georgenjehia@yahoo.com
A. Onyango	NCCP-KEBS	0722268225	akothe@kebs.org
Prof. Kangethe	UON	0722363873	mburajudith@gmail.com
Dr. J.M. Gachoya	DVS/VPH	0721238244	gachoyam@gmail.com

Absent with apology

Dr. M. Gathura	PRINCIPAL, MTI
Dr. P. Nguhiu	DVS/VPH
Dr. J. Lwoyero	DVS/VPH
Mr. Kilonzo Robert	Ministry of Public Health and Sanitation (MOPH&S)

Agenda

1. Streamlining the objectives of the task force
2. Review terms of reference (TOR)
3. Formulation of possible working groups
4. Develop a work plan and schedule of meetings
5. A.O.B



Codex Guidelines, CoP

CAC/RCP 61-2005 Page 1 of 15

CODE OF PRACTICE TO MINIMIZE AND CONTAIN ANTIMICROBIAL RESISTANCE
CAC/RCP 61-2005

INTRODUCTION 2

AIMS AND OBJECTIVES 2

RESPONSIBILITIES OF THE REGULATORY AUTHORITIES 4

Quality Control of veterinary antimicrobial drugs 5

Assessment of efficacy 5

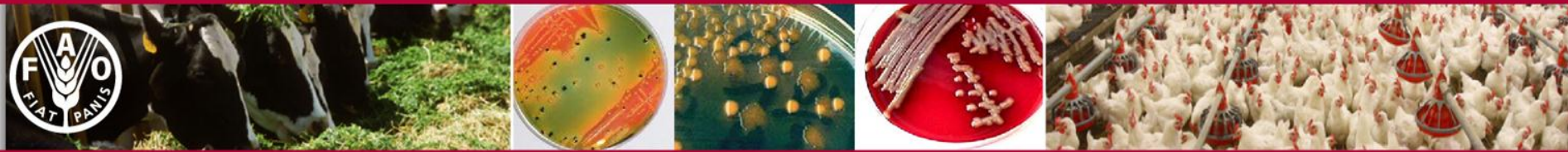
Support implementation

GUIDELINES FOR RISK ANALYSIS OF FOODBORNE ANTIMICROBIAL RESISTANCE

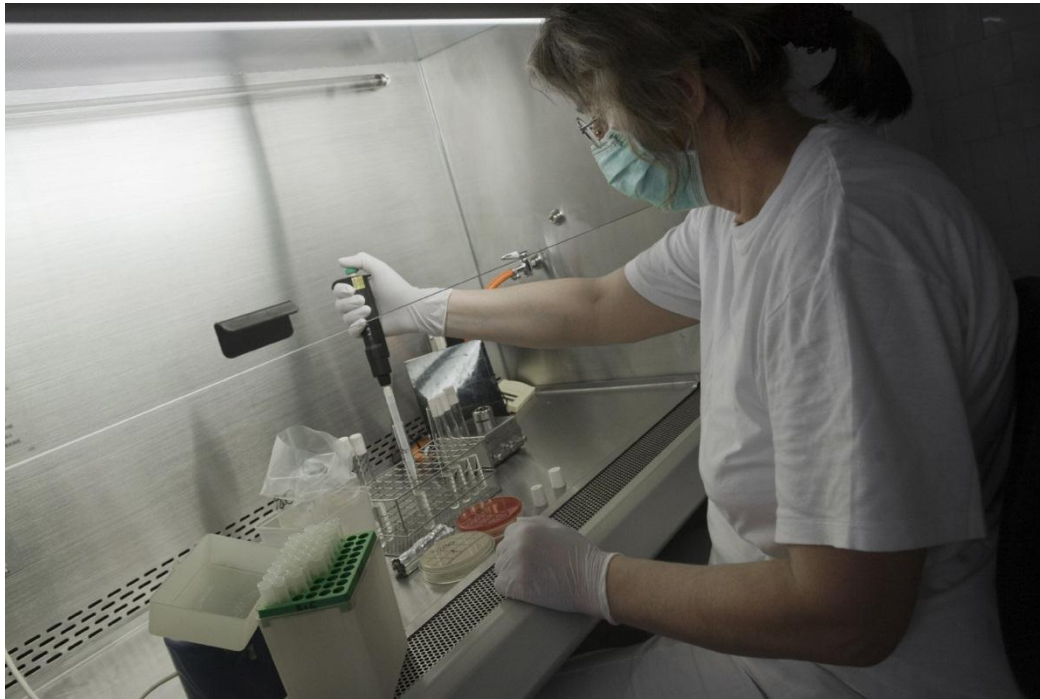
CAC/GL 77-2011

Table of Contents

- Introduction
- Scope
- Definitions
- General Principles for Foodborne AMR Risk Analysis



Laboratory capacity development



- Equipment and supplies;
- Training;
- Pilot AMR surveillance studies;
- *Future direction* – Laboratory CD based on existing FAO support for regional laboratory and epidemiology networks.



Regional Office for
Asia and the Pacific

APHCA

Animal Production and Health Commission for Asia and the Pacific



18 member countries - *Australia, Bangladesh, Bhutan, India, Indonesia, Iran, DPR Korea, Lao PDR, Malaysia, Mongolia, Myanmar, Nepal, Pakistan, Papua New Guinea, Philippines, Samoa, Sri Lanka and Thailand*

1. International Workshops/seminars;

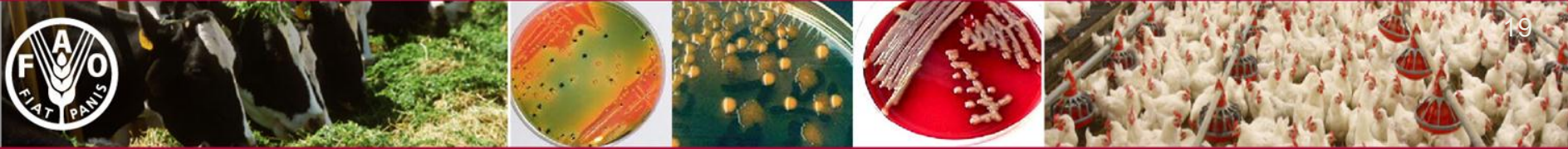
1. The Use of Antimicrobials in Livestock Production and Antimicrobial Resistance in the Asia–Pacific Region - Negombo, Sri Lanka, on 22–23 October 2012
2. Expert Workshop ‘Towards Standardization and Harmonization of Monitoring of AMU in Livestock and AMR in Livestock-associated Micro-organisms in the Asia-Pacific Region’ Thailand, Bangkok - 14-15 May 2013.
3. 37th APHCA Session and Regional FAO-APHCA OIE Workshop on Zoonoses, Food-borne Diseases and Antimicrobial Resistance - 22-26 September 2013, Thimphu, Bhutan,

2. AMR Projects/initiatives –

1. TCP/RAS/3404 (TCPF) – Livestock Production and Antimicrobial Resistance in Asia - with an Emphasis on the SAARC Sub-Region
2. A Review of Antimicrobial Resistance in Bacterial Micro-Organisms Isolated from Livestock and Livestock Products in the Asia-Pacific Region; Chulalongkorn University - (ongoing)

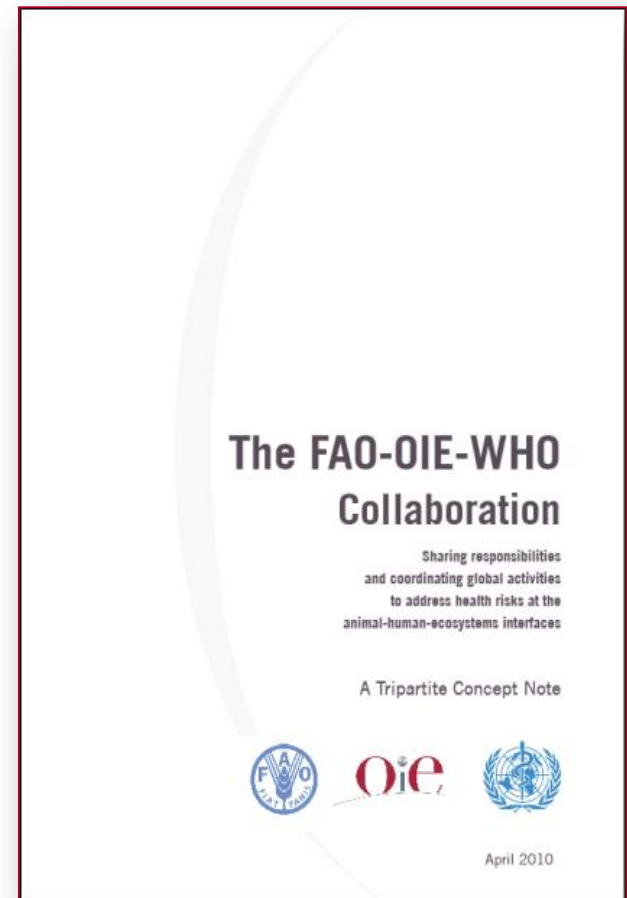


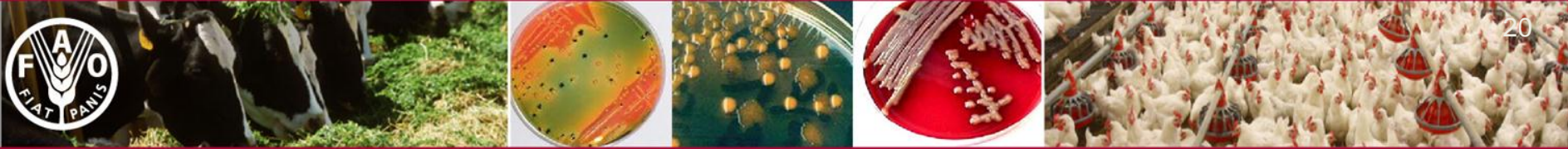
FAO/OIE/WHO Tripartite activities



Need for common actions

- A stronger collaboration between WHO, FAO and OIE
- Sharing responsibilities and coordinating global activities to address health risks at the animal-human-ecosystems interfaces
- Three 'flagship' topics:
 - Zoonotic influenza
 - Rabies
 - **Antimicrobial resistance (AMR)**
- High Level Technical Meeting, Mexico October 2011

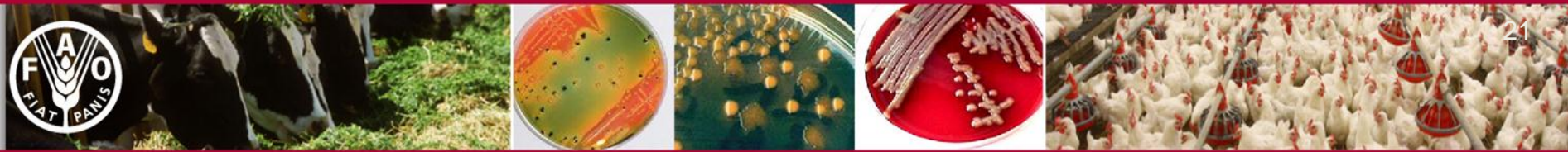




The solution

- A holistic and coordinated management of AMR across the animal, food and human sectors in different ecosystems and geographic locations
- Improved intersectoral collaboration – esp. where regulations of medicines are managed by different entities

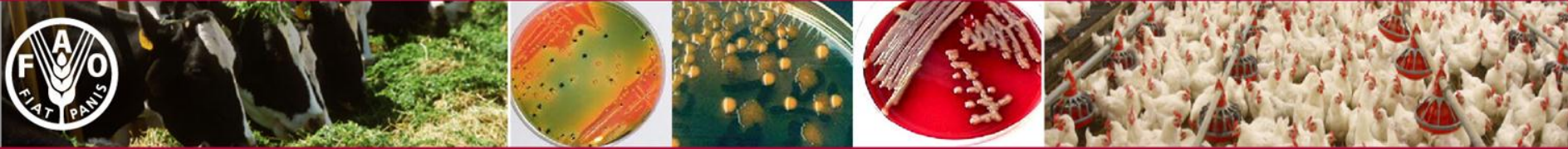




Needs

- **International standards** (to harmonise protocols and methodologies) to monitor AMR and antimicrobial usage
- **Surveillance data** on AMR and antimicrobial usage to support AMR risk analysis
- **Technical capacity** (for surveillance of AMR and antimicrobial usage and AMR risk analysis)
- **Coordinated research** on effectiveness of policies to achieve AMR risk reduction
- **R&D new drugs**
- **Legislation** on access to quality drugs and restricted use
- **Good governance** of all sectors related to authorisation and use of antimicrobials (lab expertise, international standards and legislation development and implementation, surveillance and monitoring)





Key messages

- World population growth, urbanization and increased incomes will drive up the demands for protein based foods;
- Increased demands mean AMU will grow (appropriate and inappropriate use) – with increased risks of AMR emergence and spread;
- Need to narrow the gap in technical capacities between developed and developing countries ;
- AMR bacteria and genes do not recognize geographical, ecological or phylo-genetic boundaries.
- Global action and collaboration are essential to address AMR and to safeguard efficacy and availability of antimicrobial agents for veterinary and human use.



THANK YOU for YOUR ATTENTION



Patrick.otto@fao.org