



**WORLD ORGANISATION FOR ANIMAL HEALTH**  
*Protecting animals, preserving our future*

# Collection of quantitative data on the use of antimicrobial agents in animals: the OIE database

Regional Seminar OIE National Focal Points for  
Veterinary Products,  
Ezulwini, Swaziland 6-8 December 2017

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# Outline

- History of the OIE Survey
- Objectives
- Description of the template
- Description of the OIE approach
- Conclusion

# History-OIE Survey

- OIE developed a questionnaire in 2012 on monitoring the quantities of antimicrobial agents used in animals in worldwide
- The first Questionnaire sent to all the OIE Delegates and copied to the OIE National Focal Points for Veterinary Products in June 2012
- Results presented at the OIE Global Conference on the Responsible and Prudent Use of Antimicrobial Agents for Animals held in March 2013 in Paris, France

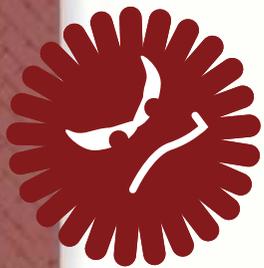
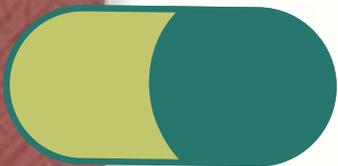
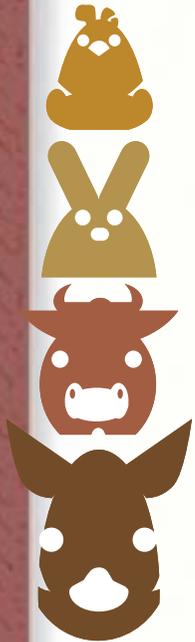
# OIE Survey - Objectives

- **To enhance** the OIE's engagement in the initiative to prevent antimicrobial resistance;
- **To conduct** a survey of the implementation by OIE Member Countries of OIE *Terrestrial Animal Health Code* Chapter 6.8. "Monitoring of the quantities and usage patterns of antimicrobial agents used in food producing animals" and OIE *Aquatic Animal Health Code* Chapter 6.3. "Monitoring of the quantities and usage patterns of antimicrobial agents used in aquatic animals";
- **To improve** awareness and provide an overview of antimicrobial use in animals by OIE Member Countries;
- **To determine** what actions are needed and **to collaborate with the OIE** to develop its strategy in this field.

# OIE GLOBAL CONFERENCE ON THE RESPONSIBLE AND PRUDENT USE OF ANTIMICROBIAL AGENTS FOR ANIMALS

**International Solidarity to Fight against  
Antimicrobial Resistance**

**Paris (France), 13–15 March 2013**



# Recommendations of the OIE Global Conference on the responsible and prudent use of antimicrobial agents for animals

## To the OIE Member Countries

**Recommendation 3.** To develop and set up an official harmonised national system for collecting data on the monitoring of antimicrobial resistance in relevant animal pathogens and quantities of antimicrobial agents used in food producing animals at the national level based on the OIE standards.

## To the OIE

**Recommendation 7.** To collect harmonised quantitative data on the use of antimicrobial agents in animals with the view to establish a global database.

# OIE global database on the use of antimicrobial agents in animals

- An OIE *ad hoc* Group was convened to:
  - ✓ **Establish an overall approach** to collect and report standardised quantitative data on antimicrobial agents used in animals supporting implementation of Chapter 6.8 of the *Terrestrial Animal Health Code* and 6.3 of the *Aquatic Animal Health Code*.
  - ✓ Address **Recommendation 7** of the OIE *Global Conference on the Responsible and Prudent Use of Antimicrobial Agents for Animals*

# OIE global database on the use of antimicrobial agents in animals

- *AMR Ad Hoc Group* Meetings were /are held on regular basis ( the next : 22-24 January 2018)
- International experts + Representatives from FAO, OIE, and WHO

# OIE global database on the use of antimicrobial agents in animals

**OIE data collection template: the goal is that as many countries as possible contribute, according to their detail of data collection**

## Four levels of Reporting:

- Baseline Information
- Baseline Information + Reporting Option 1
- Baseline Information + Reporting Option 2
- Baseline Information + Reporting Option 3

All OIE Member Countries should complete the Baseline Information

- Depending of the level of detail available in the reporting country, either page labelled « Reporting option » 1, 2 or 3 should be completed

# The OIE approach

1

- A system where all Member Countries can contribute, at varying levels of detail according to their capacity

2

- That safeguards sensitive information

3

- That is pragmatic regarding the data collection and reporting

4

- That 'compares apples with apples'

# 1. A system where all Countries can contribute

- **Baseline Information** [*All Member Countries (MCs)*]
  - all OIE Member Countries (MCs) can provide answer Part A and Part B
- **Reporting Option 1** – limited differentiation [*Some MCs*]:
  - a. Can summarise all amounts into one figure (**overall amount** used for **all purposes** in **all animal species**)  
or
  - a. Report for all animal species together, **differentiated** by:
    - Substance class
    - Therapeutic use versus growth promotion use

# Parts A and B of the Baseline Information Option

<b>*** This sheet of the OIE template should be completed by all OIE Member Countries ***</b> Please refer to the Guidance document for further instructions.		
<b>A. Contact Person for Antimicrobial Agents Use Data Collection</b>		
1	Title	<free text field>
2	Name (First name, SURNAME)	<free text field>
3	Role with respect to the OIE	<input type="checkbox"/> OIE Delegate <input type="checkbox"/> OIE Focal Point for Veterinary Products <input type="checkbox"/> Other
4	Organisation	<free text field>
5	Organisation's Address	<free text field>
6	Country	<free text field>
7	Phone Number	<free text field>
8	Email Address	<free text field>
<b>B. General Information</b>		
9	Are data on the amount of antimicrobial agents intended for use in animals available?	<input type="checkbox"/> Amounts available - Yes <input type="checkbox"/> Amounts available - No
10	<i>Please indicate why the data are not available at this time in your country, if the answer to Question 9 is 'No'</i>	<free text field>
11	Are antimicrobial agents used for growth promotion purposes in animals in your country?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
12	Does your country have legislation/regulations on the use of antimicrobial agents as growth promoters in animals?	<input type="checkbox"/> Legislation/regulation exists - Yes <input type="checkbox"/> Legislation/regulation does not exist - No
13	If your country has legislation/regulation on the use of antimicrobial agents as growth promoters in animals, could you please indicate the appropriate case that applies in your country?	<input type="checkbox"/> All antimicrobial agents banned for use as growth promoters <input type="checkbox"/> Some antimicrobial agents banned for use as growth promoters <input type="checkbox"/> One or more antimicrobial growth promoters are authorised for use
14	Please provide a list of antimicrobial agents authorised as growth promoters, if any	<free text field>

Questions in **bold** are mandatory. Please provide this information as requested. Questions in *grey italics* are optional.

Please provide the contact information of the person completing this template, in case there are queries on the information provided. Please select the appropriate 'Role with respect to the OIE' from the list.

Please provide the telephone number in the format " (country code) phone number ".

**Growth Promotion** refers to the use of antimicrobial substances to increase the rate of weight gain and/or the efficiency of feed utilisation in animals by other than purely nutritional means. The term does NOT apply to the use of antimicrobial agents for the specific purpose of treating, controlling or preventing infectious diseases, even when an incidental growth response may be obtained.



# 1. A system where all can contribute

## OIE data collection template – Reporting option 1:

OIE template for the collection of data on antimicrobial agents intended for used in animals  
 Reporting option 1 - Overall amount sold for/used in animals by antimicrobial class; with the possibility to separate by type of use

	Overall Amount: Growth Promotion + Therapeutic Use	Amount: Therapeutic Use (including prevention of clinical signs)	Amount: Growth Promotion
Antimicrobial Class	All animal species (kg)	All animal species (kg)	All animal species (kg)
Aminoglycosides	0		
Amphenicols	0		
Arsenicals	0		
Cephalosporins (all generations)	0	0	0
1-2 gen. cephalosporins	0		
3-4 gen cephalosporins	0		
Fluoroquinolones	0		
Glycopeptides	0		
Glycophospholipids	0		
Lincosamides	0		
Macrolides	0		
Nitrofurans	0		
Orthosomycins	0		
Other quinolones	0		
Penicillins	0		
Pleuromutilins	0		
Polypeptides	0		
Quinoxalines	0		
Streptogramins	0		
Sulfonamides (including trimethoprim)	0		
Tetracyclines	0		
Others	0		
Aggregated class data	0		
<b>Total kg</b>	<b>0</b>	<b>0</b>	<b>0</b>

# 1. A system where all can contribute

- **Reporting Option 2** – more differentiation options:
  - a. One can summarize all amounts into one figure (overall amount used for all purposes in all animal species) or
  - b. Differentiate by:
    - Substance class
    - Therapeutic use versus growth promotion use in all animal species **and**
    - Differentiate therapeutic use for one or more of the animal species groups
      - ➔ Companion animals
      - ➔ All food-producing animals
      - ➔ Terrestrial food producing animals
      - ➔ Aquatic food-producing species

# 1. A system where all can contribute

## OIE data collection template – Reporting Option 2:

OIE template for the collection of data on antimicrobial agents intended for use in animals  
Reporting option 2 - Overall amount sold for/used in animals by antimicrobial class; with the possibility to separate by type of use and species group

Antimicrobial Class	Overall Amount: Growth Promotion + Therapeutic Use	Amount for: Therapeutic Use (including prevention of clinical signs)					Amount: Growth Promotion
	All animal species (kg)	All animal species (kg)	Companion animals (kg)	All Food-producing animals (terrestrial & aquatic) (kg)	Terrestrial Food- producing animals (kg)	Aquatic Food- producing animals (kg)	All Food-producing animals (terrestrial & aquatic) (kg)
Aminoglycosides							
Amphenicols							
Arsenicals							
Cephalosporins (all generations)	0	0	0	0	0	0	0
1-2 gen. cephalosporins							
3-4 gen cephalosporins							
Fluoroquinolones							
Glycopeptides							
Glycophospholipids							
Lincosamides							
Macrolides							
Nitrofurans							
Orthosomycins							
Other quinolones							
Penicillins							
Pleuromutilins							
Polypeptides							
Quinoxalines							
Streptogramins							
Sulfonamides (including trimethoprim)							
Tetracyclines							
Others							
<b>Aggregated class data</b>							
<b>Total kg</b>	0	0	0	0	0	0	0

# 1. A system where all can contribute

- Reporting Option 3 – most detailed differentiation options:
    - a. One can summarize all amounts into one figure (overall amount used for all purposes in all animal species) or
    - b. Differentiate by:
      - Substance class
      - Therapeutic use versus growth promotion use in all animal species
        - Differentiate therapeutic use for animal species groups
          - Companion animals
          - All food-producing animals
          - Terrestrial food producing animals
          - Aquatic food-producing species
- and
- Differentiate therapeutic use also by most important routes of administration
    - Oral route
    - Parenteral route (Injection)
    - Other routes

# 1. A system where all can contribute

## OIE data collection template – Reporting Option 3:

OIE template for the collection of data on antimicrobial agents intended for used in animals

Antimicrobial Class	Overall Amount: Growth Promotion + Therapeutic Use		Amount: Therapeutic Use (including prevention of clinical signs)														Amount: Growth Promotion	
	All Animal Species		All animal species			Companion animals			All food-producing animals (terrestrial and aquatic)			Terrestrial food-producing animals			Aquatic food-producing animals			All food-producing animals (terrestrial and aquatic)
	All routes (kg)		Oral route (kg)	Injection route (kg)	Other routes (kg)	Oral route (kg)	Injection route (kg)	Other routes (kg)	Oral route (kg)	Injection route (kg)	Other routes (kg)	Oral route (kg)	Injection route (kg)	Other routes (kg)	Oral route (kg)	Injection route (kg)	Other routes (kg)	All routes (kg)
Aminoglycosides	0		0	0	0				0	0	0							
Amphenicols	0		0	0	0				0	0	0							
Arzonicols	0		0	0	0				0	0	0							
Cephalosporins (all generations)	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-2 gen. cephalosporins	0		0	0	0				0	0	0							
3-4 gen. cephalosporins	0		0	0	0				0	0	0							
Fluroquinolones	0		0	0	0				0	0	0							
Glycopeptides	0		0	0	0				0	0	0							
Glycopeptidolipids	0		0	0	0				0	0	0							
Lincosamides	0		0	0	0				0	0	0							
Mecaridols	0		0	0	0				0	0	0							
Mitramycins	0		0	0	0				0	0	0							
Orthosomycins	0		0	0	0				0	0	0							
Other quinolones	0		0	0	0				0	0	0							
Penicillins	0		0	0	0				0	0	0							
Plouramutilins	0		0	0	0				0	0	0							
Polypeptides	0		0	0	0				0	0	0							
Quinoxalines	0		0	0	0				0	0	0							
Streptogramins	0		0	0	0				0	0	0							
Sulfonamides (including trimethoprim)	0		0	0	0				0	0	0							
Tetracyclines	0		0	0	0				0	0	0							
Others	0		0	0	0				0	0	0							
Aggregated class data	0		0	0	0				0	0	0							
Total kg	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

# 1. A system where all can contribute

## OIE data collection template – How to choose the suitable option:

Reporting Option	Scope
1	Overall amount sold for/used in animals by <b>antimicrobial class</b> ; with the possibility to separate by <b><u>type of use</u></b>
2	Overall amount sold for/used in animals by <b>antimicrobial class</b> ; with the possibility to separate by <b><u>type of use</u></b> and <b><u>species group</u></b>
3	Overall amount sold for/used in animals by <b>antimicrobial class</b> ; with the possibility to separate by <b>type of use</b> , <b>species group</b> , and <b><u>route of administration</u></b>

## 2. A system that safeguards sensitive information

- Confidentiality of commercially sensitive information
- OIE approach: an aggregate reporting option
  - Aggregate reporting allows the summing up of amounts for several similar antimicrobials, to maintain confidentiality of sales volumes for individual products,
  - **Note:** The names of the aggregates substance should be listed in the box below the Reporting Option.

<i>If 'Aggregated class data' are reported, please list the classes combined</i>	<free text field>	List all classes for which the amounts were combined, using whenever possible the 'Antimicrobial class' terms or the terminology of the OIE list of antimicrobial agents of veterinary importance. Substances included in the data aggregation that are not part of the recommended terminology should also be listed. If one class was reported that needs to remain confidential, please enter 'Confidential'.
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- *Example:*
  - In one country only one company sells 'tiamulin', and no other 'pleuromutilin' class antibiotic is sold in that country. If the total amount of 'tiamulin' is reported under the 'pleuromutilin' class, all competitors immediately know the 'tiamulin' sales volume

## 3. A pragmatic system

### IDEAL WORLD

- Amounts used in animals
- Only active parts of molecules are counted
- Comparable data are collected from comparable system

### REAL WORLD (OIE DATA)

- Amounts imported or sold for animals in kg
- Mostly the complete molecule (chemical compound as listed on the label) is counted
- Data from many different systems are reported

## 4. Comparing 'apples with apples'

### The OIE template

- 4 sheets, three reporting option choices, allowing for 4 levels of reporting
  - Baseline Info only
  - Baseline Info + Reporting Option 1
  - Baseline Info + Reporting Option 2
  - Baseline Info + Reporting Option 3

### Result:

- Understand distinctions between countries and their systems
- Allows identification of available information for transparent reporting, while respecting confidentiality
- A system where all Member Countries can contribute, at varying levels of detail according to their capacity

# Tools for using the OIE template



## Guidance for completing the OIE template for the collection of data on antimicrobial agents intended for use in animals

### Contents

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### Introduction

The OIE proposes to collect data on [antimicrobial agents](#) intended for use in animals from OIE Member Countries implementing Chapter 6.8, “Monitoring of the quantities and usage patterns of antimicrobial agents used in food-producing animals” of the OIE *Terrestrial Animal Health Code* and Chapter 6.3 “Monitoring of the quantities and usage patterns of antimicrobial agents used in aquatic animals” of the OIE *Aquatic Animal Health Code*, and to contribute to the global effort against antimicrobial resistance.

Member Countries differ in the degree to which they collect, collate and publish data on antimicrobial sales or use in animals and also in the degree to which they can stratify the quantities of antimicrobial agents intended for use in animals or for use in different animal species.

Through this initiative, by means of a specific template (hereafter “OIE template”), the OIE seeks to collect data on antimicrobial agent intended for use in animals from all OIE Member Countries in a harmonised way. Using a phased approach, the OIE will initially focus on **sales**<sup>1</sup> of antimicrobial agents intended for use in animals as an indicator of actual use. All antimicrobial agents intended for use in animals and listed in the OIE List of antimicrobial agents of veterinary importance<sup>2</sup>, plus certain antimicrobial agents only used for [growth promotion](#) should be reported. The exceptions are ionophores, which are mostly used for parasite control and therefore need not be reported as antimicrobial agents. The OIE places highest priority on food-producing animals; however, data on all animals, *including companion animals*, may be reported. Reporting will occur at antimicrobial class level and, on one occasion, at sub-class level.

For the purpose of reporting data on antimicrobial quantities (amounts sold or imported for use in animals expressed in kilograms (kg) of antimicrobial agent, i.e., [chemical compound](#) as declared on the product label, that is to be calculated from the available information as explained in the Annex to this Guidance document), animals are grouped into ‘all animal species’, ‘companion animals’, ‘all food-producing animals’, ‘terrestrial food-producing animals’, and ‘aquatic food-producing animals’.

<sup>1</sup> ‘Sales’, in the context of the OIE data collection on antimicrobial agents used in animals, should be interpreted to include data on import of antimicrobial agents for use in animals

### Annex to the Guidance for Completing the OIE template for the collection of data on Antimicrobial Agents intended for use in Animals:

#### Considerations on converting content of antimicrobial active ingredients in veterinary medicines into kilograms

##### Calculating the quantities to report in kilogram (kg)

Data on antimicrobial agents intended for use in animals comes in different forms. The OIE template for the collection of data on antimicrobial agents used in animals (OIE template) is designed to collect data on the amounts of chemical compound as declared on the product label. The information may vary, ranging from bulk quantities of antimicrobial agents to numbers of packs of a veterinary medicinal product. The content of antimicrobial agents in such products can be stated in a number of possible ways. It will be necessary, where appropriate, to calculate the required data to populate the OIE template.

Detailed instructions are provided to harmonise some aspects of data reporting:

- Transformation of bulk quantities ([section 1](#)); use this section if you need to convert quantities of raw material, e.g. from import data into the required format.
- Data on veterinary medicinal products ([section 2](#)), including conversion from International Units (IU) to kg (section 2. (ii))
- Recommendations are made in [section 3](#) for further optional conversions, aimed at achieving refined reporting of active entities, the ultimately desired format. If such calculations are made, they should be reported in the OIE template in the free text field provided on the sheets for Reporting Option 1, 2 and 3.

The following abbreviations and symbols will be used:

Symbol/abbreviation	Explanation
Strength	amount of antimicrobial agent per unit of veterinary product
% w/v	per cent weight per volume
mg	milligram
g	gram
kg	kilogram
t	ton (metric)
ml	millilitre
l	litre

#### 1. For data on bulk quantities

Such information is usually sourced from customs, import or other bulk trading. It will likely come as a weight in a number of possible units (e.g. metric tons) of chemical compound and needs to be converted to kg. When conversion into kg is necessary, follow the steps below. If additional conversion factors are needed, please contact the OIE at [antimicrobialuse@oie.int](mailto:antimicrobialuse@oie.int).

**Step 1:** Multiply the amount of antimicrobial agent, i.e. the chemical compound as declared on the product label with the appropriate conversion factor from the table 1 below.

$$\text{Antimicrobial agent (kg)} = \text{antimicrobial agent (unit Z)} \times \text{conversion factor}$$

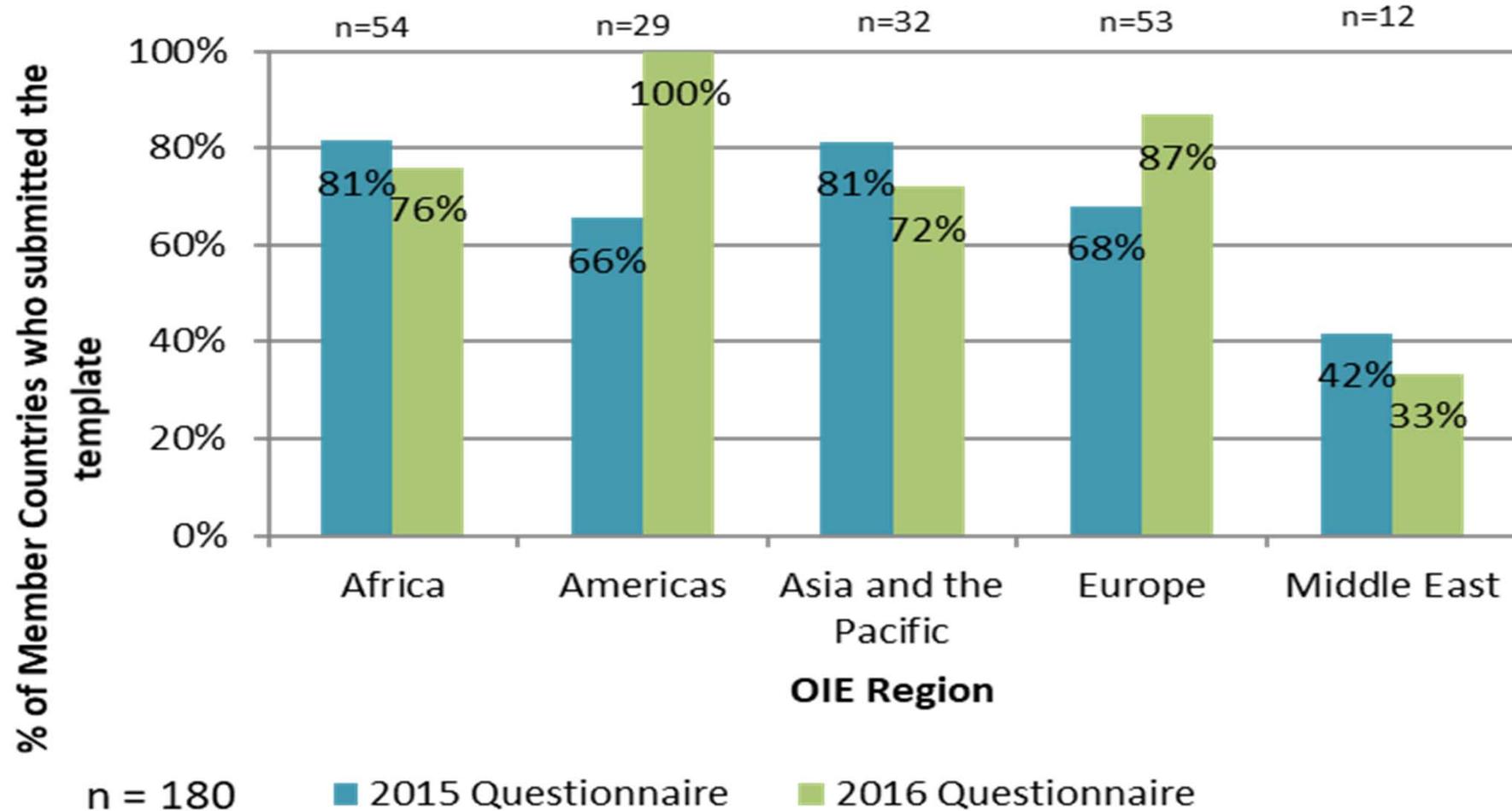
Table 1: Converting weight units into kg

Unit reported (unit Z)	Conversion factor to kg (for multiplication)
Metric ton	1000
Imperial ton (long)	1016
Imperial ton (short)	907.18

In case of questions contact the OIE Science and New Technologies Department by email at [antimicrobialuse@oie.int](mailto:antimicrobialuse@oie.int)



# OIE Member Countries that submitted templates for the first and second phase of data collection



# Conclusion

By your contribution of providing data to the OIE template for the collection of data on antimicrobials used in animals,

*we can achieve the aim of having a GLOBAL DATABASE on antimicrobial use*



# Thank you for your attention



Organisation Mondiale  
de la Santé Animale

World Organisation  
for Animal Health

Organización Mundial  
de Sanidad Animal