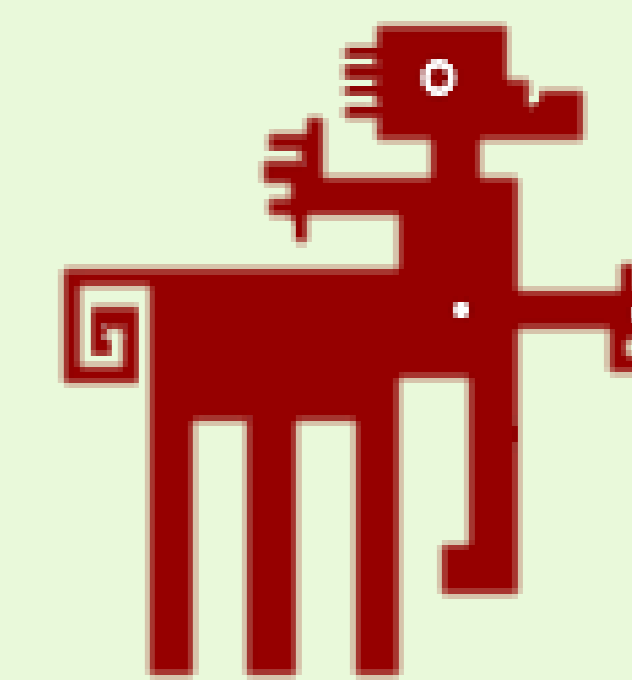


THE USE OF ANTIBIOTICS IN THE LIVESTOCK



INTRODUCTION

In production animals, antibiotics are used for growth promotion, metaphylaxis and treatment

It has been described a very clear association between the use of antibiotics and the development of resistance among bacteria

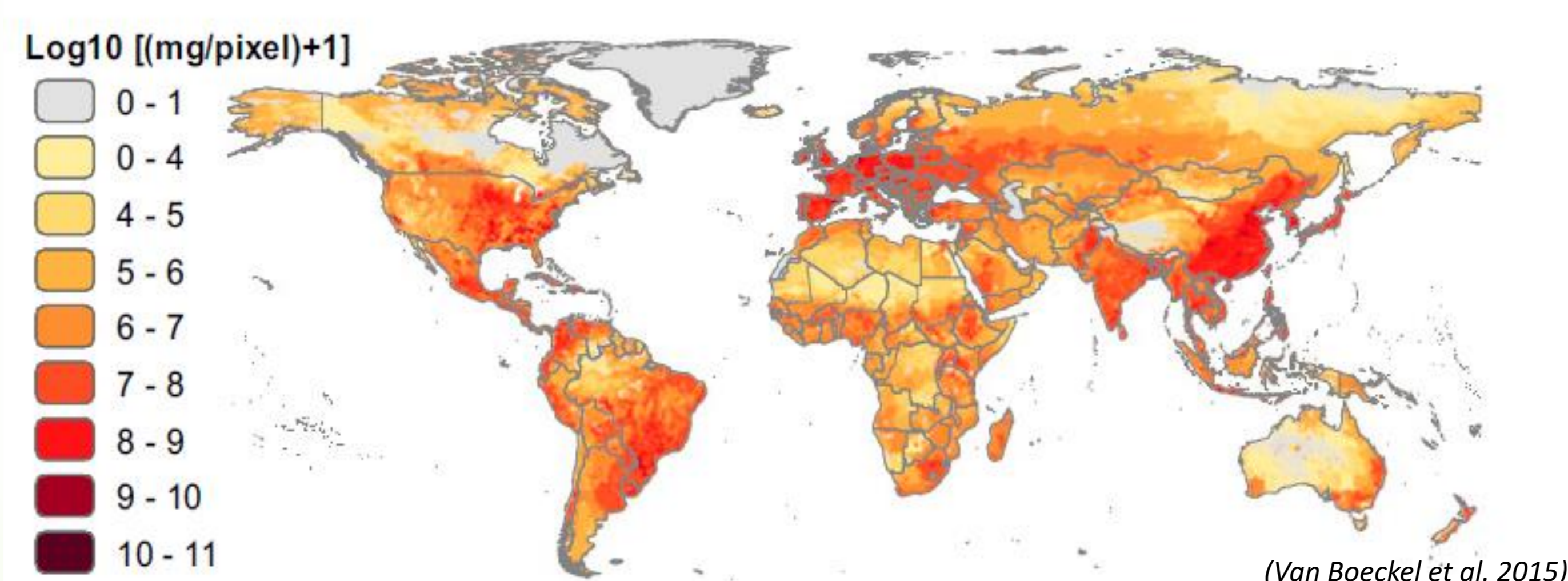
The actual issue of antibiotic resistance is related to their overdose and inadequate use

OBJECTIVES

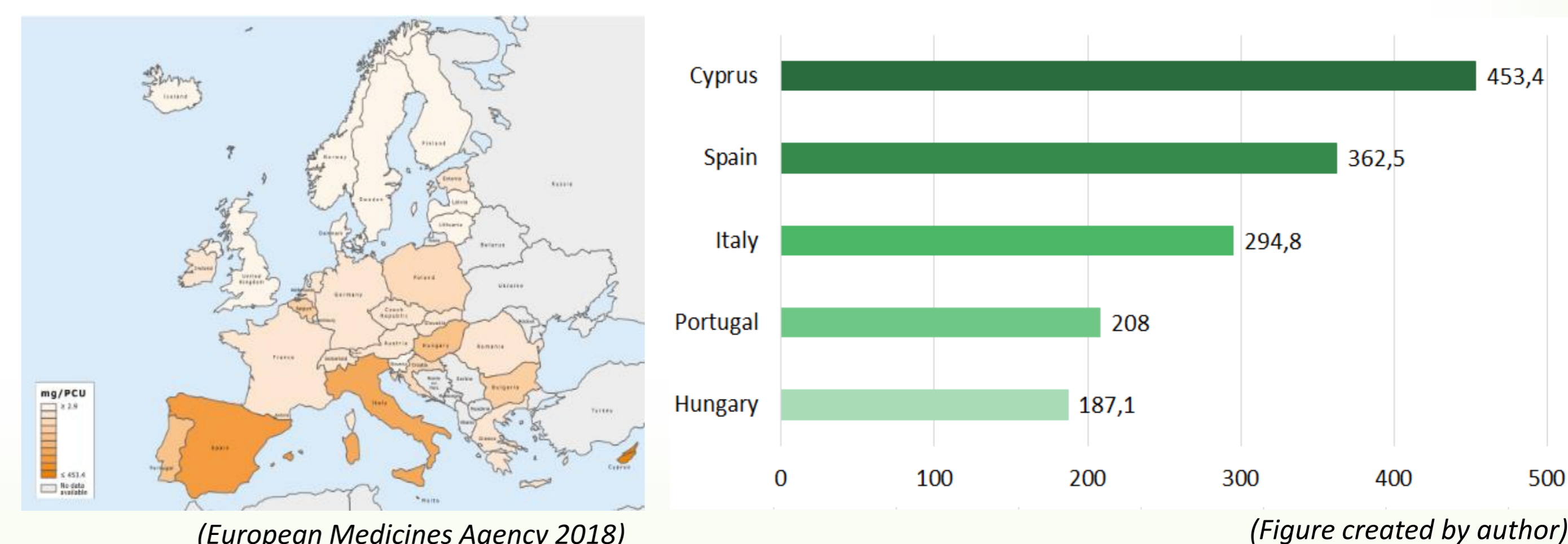
- To manifest the actual existing concern regarding antibiotic resistance
- To recommend some guidelines on how to make a proper use of antibiotics
- To inform about the use of possible alternatives to decrease the appearance of resistance

ACTUAL SITUATION OF THE USE OF ANTIBIOTICS IN LIVESTOCK IN THE DIFFERENT COUNTRIES

The world consume in at 2010 was estimated to be off 63.151 tons
The countries with more consumption were China (23%), United States of America (13%), Brazil (9%), India (3%) and Germany (3%)

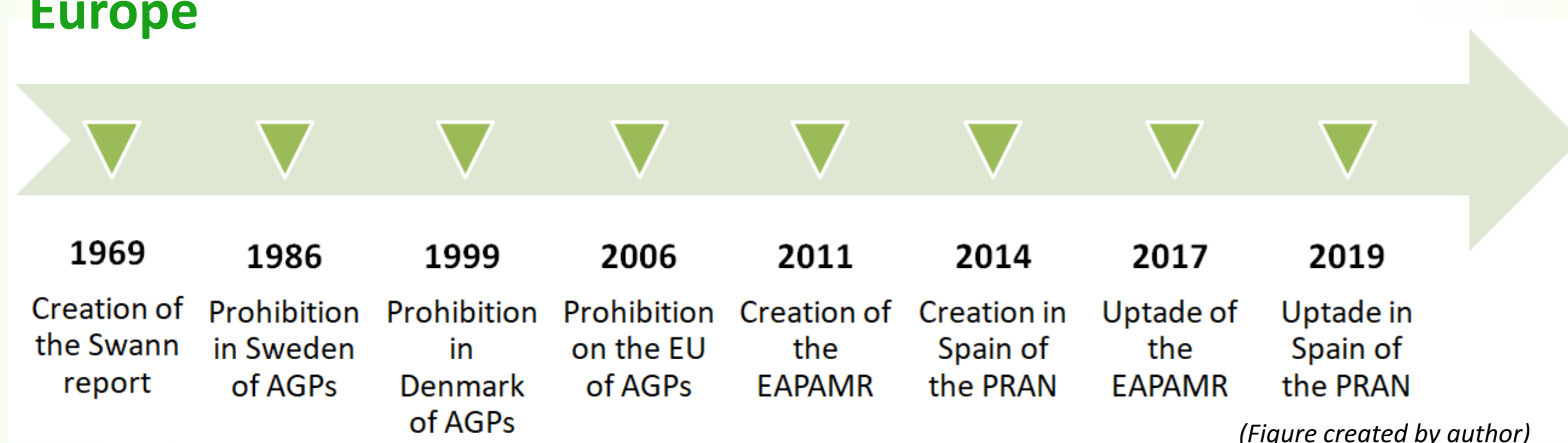


In Europe, during 2015 the countries with higher consumption were Cyprus, Spain and Italy
Between 2011 and 2016 a global decrease of 20% of sales was observed



ACTIONS AND REGULATIONS FOR THE ADEQUATE USE OF ANTIBIOTICS

Europe



January 2019: Prescription regulation for antibiotic

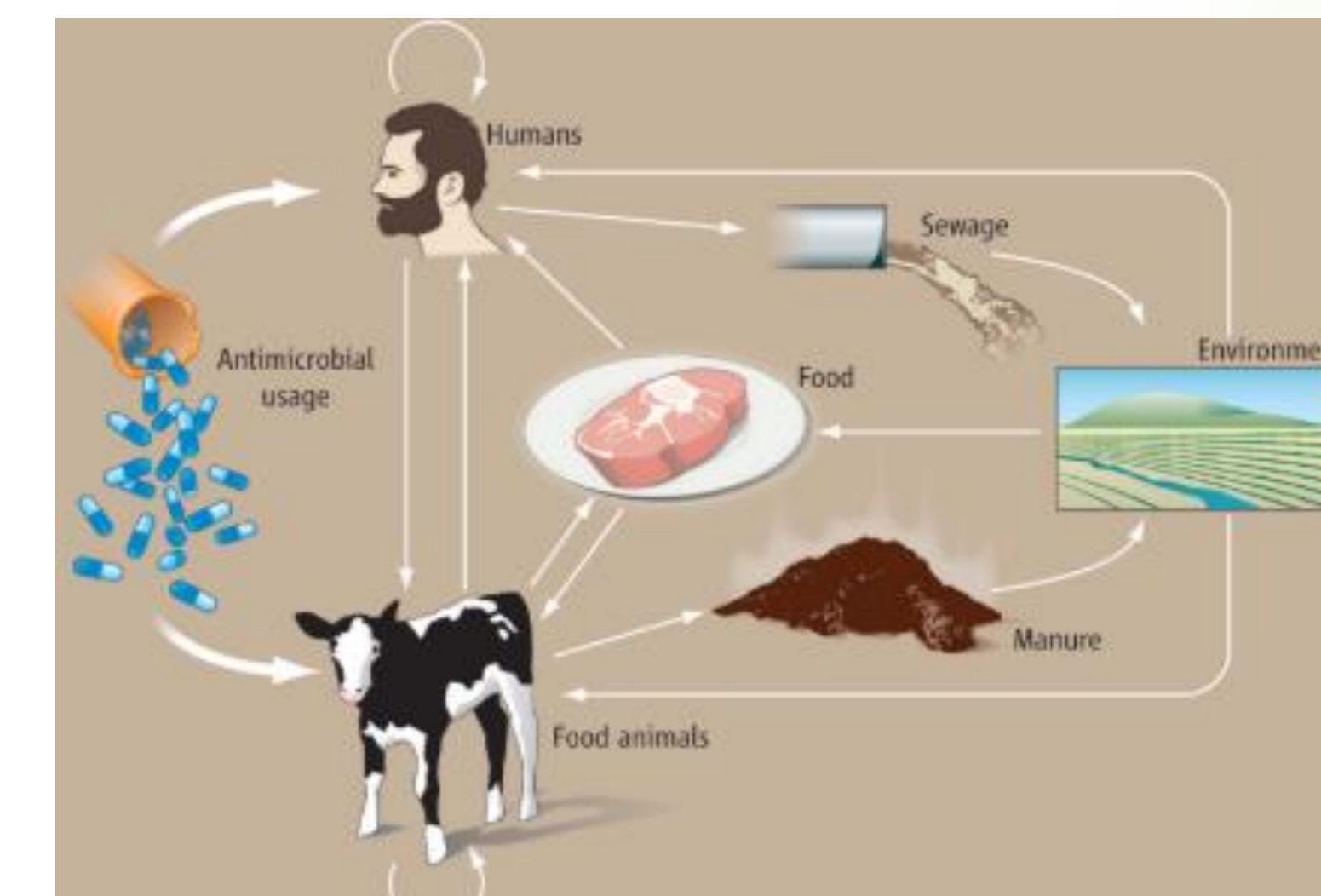
February 2019: Update of the categorization of antibiotics based on the creation of resistances

REPERCUSSIONS OF THE ANTIBIOTIC OVERDOSE

The human, animal and environmental health are involved, and that is why it is essential to have a **One Health** approach.

Regarding public health: it is estimated that antibiotic resistance is responsible for 700.000 deaths per year on a worldwide level and it could reach the 10 million in 2050.

Regarding the environment: 58% of veterinarian antibiotics are transferred to the environment and can affect crops that will be eaten later by either humans or animals



POSSIBLE SOLUTIONS AGAINST THE APPEARANCE OF ANTIBIOTIC RESISTANCES

- Awareness and knowledge
- Behavioural change in the prescription
- Decrease of low-quality drugs
- Prohibition of antibiotics as growth promoters
- Tests of antibiotic susceptibility
- Prevention and control of infections

ANTIBIOTIC ALTERNATIVES

Phytotherapy: use of chemical products, derived from plants with beneficial effects. For example, essential oils

Probiotics: the use of an adequate amount of microorganisms that are beneficial for the host

Immunotherapy: use of modified bacterial or viral components to prevent infections

CONCLUSIONS

- Resistance to antibiotics is a threat to global health, it is a complex and a multifactorial issue
- The use of antibiotics in animals and humans are still excessive.
- The alternatives will be useful in a future, but there is not enough information at the moment