

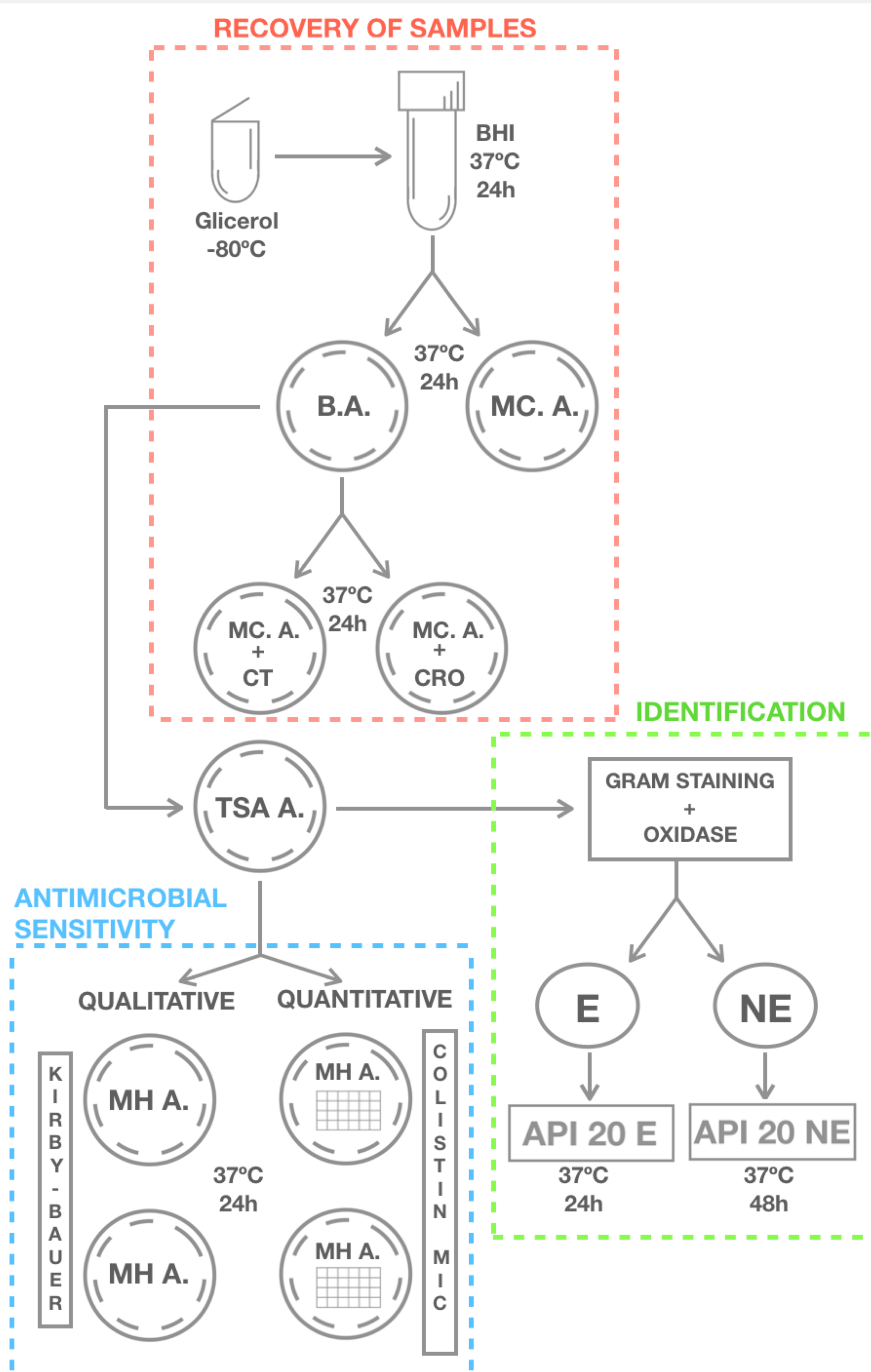
INTRODUCTION

In the last years, the appearance of antimicrobial resistances (AMR) has become a global public health hazard. Since multi-resistant bacteria (MDR) are rooted in humans, animals and the environment, it is necessary to tackle the problem from multiple fields. Wildlife carrying AMR bacteria can be useful as bacteria resistance sentinels in the environment where they live.

OBJECTIVES

- To determine the prevalence of AMR bacteria in invasive species of aquatic media *Trachemys scripta* and *Neovison vison*.
- To determine the profile of antimicrobial sensitivity of isolated bacteria.

MATERIALS AND METHODS



RESULTS

Figure 1: Identification of AMR stains

Trachemys scripta

Neovison vison

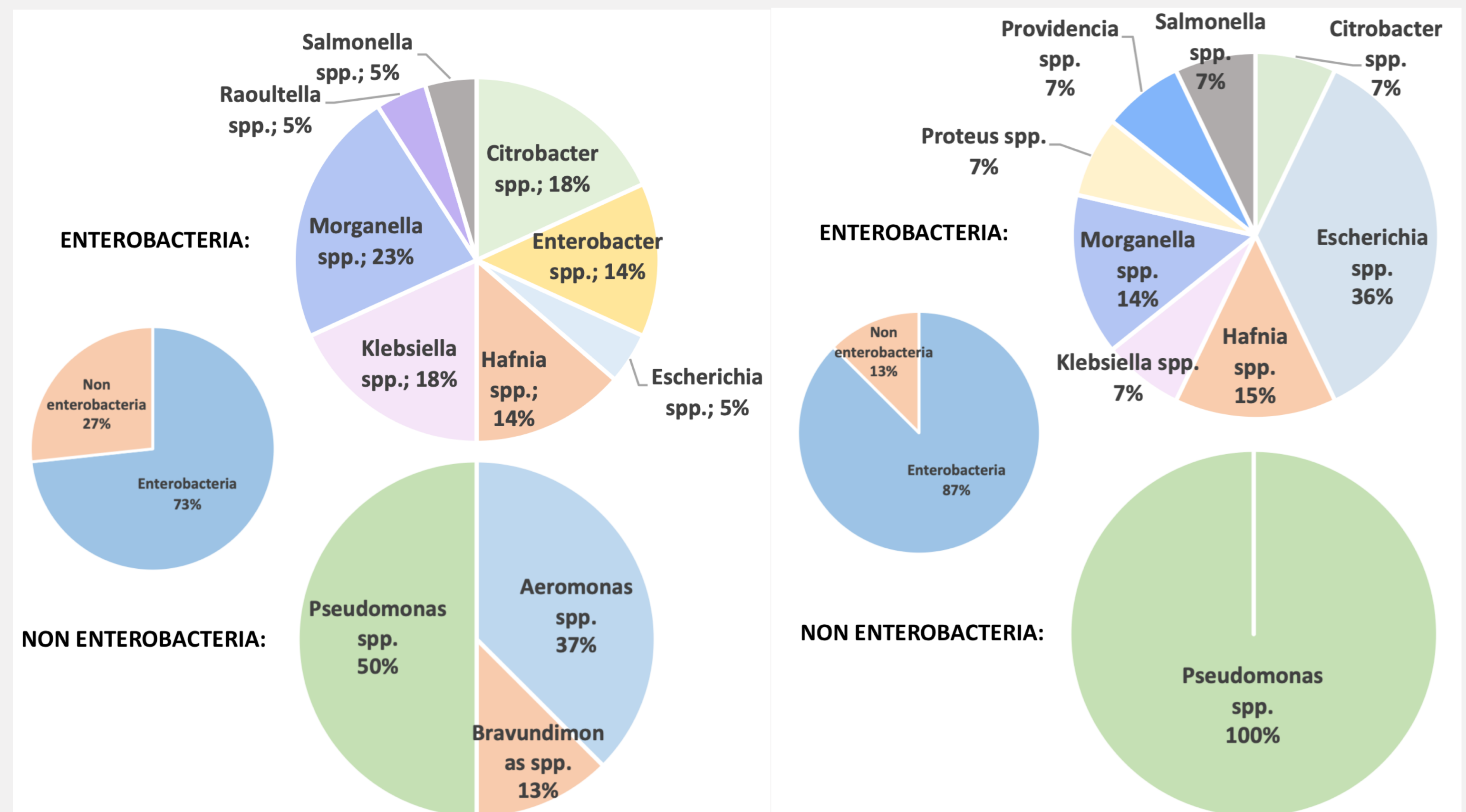


Table 1: Resistance pattern of samples

	TOTAL SAMPLES (n=46)			TRACHEMYS SCRIPTA SAMPLES (n=30)			NEOVISON VISON SAMPLES (n=16)		
	MDR (%)	XDR (%)	PDR (%)	MDR (%)	XDR (%)	PDR (%)	MDR (%)	XDR (%)	PDR (%)
Total spp.	17 (37)	7 (15,2)	4 (8,7)	13 (43,3)	5 (16,7)	3 (10)	4 (25)	2 (12,5)	1 (6,3)
Enterobacteria	10 (21,7)	7 (15,2)	3 (6,5)	6 (20)	5 (16,7)	3 (10)	4 (25)	2 (12,5)	0
<i>Citrobacter</i> spp.	3 (6,5)	0	0	3 (10)	0	0	0	0	0
<i>Enterobacter</i> spp.	0	1 (2,2)	1 (2,2)	0	1 (3,3)	1 (3,3)	Not isolated	0	0
<i>Escherichia</i> spp.	3 (6,5)	0	0	1 (3,3)	0	0	2 (12,5)	0	0
<i>Hafnia</i> spp.	1 (2,2)	0	0	1 (3,3)	0	0	0	0	0
<i>Klebsiella</i> spp.	0	4 (8,7)	0	0	3 (10)	0	0	1 (6,3)	0
<i>Morganella</i> spp.	2 (4,3)	2 (4,3)	1 (2,2)	1 (3,3)	1 (3,3)	1 (3,3)	1 (6,3)	1 (6,3)	0
<i>Proteus</i> spp.	0	0	0	Not isolated	Not isolated	Not isolated	0	0	0
<i>Providencia</i> spp.	1 (2,2)	0	0	Not isolated	Not isolated	Not isolated	1 (6,3)	0	0
<i>Raoultella</i> spp.	0	0	1 (2,2)	0	0	1 (3,3)	Not isolated	0	0
<i>Salmonella</i> spp.	0	0	0	0	0	0	0	0	0
Non enterobacteria	7 (15,2)	0	1 (2,2)	7 (23,3)	0	0	0	0	1 (6,3)
<i>Aeromonas</i> spp.	2 (4,3)	0	0	2 (6,6)	0	0	Not isolated	Not isolated	Not isolated
<i>Bravundimonas</i> spp.	1 (2,2)	0	0	1 (3,3)	0	0	Not isolated	Not isolated	Not isolated
<i>Pseudomonas</i> spp.	4 (8,7)	0	1 (2,2)	4 (13,3)	0	0	0	0	1 (6,3)

MDR (≥ 3 antimicrobial classes); XDR (resistance to all but two of the tested antimicrobial categories); PDR (resistance to all the categories tested)

Figure 2: Antimicrobial sensitivity percentage

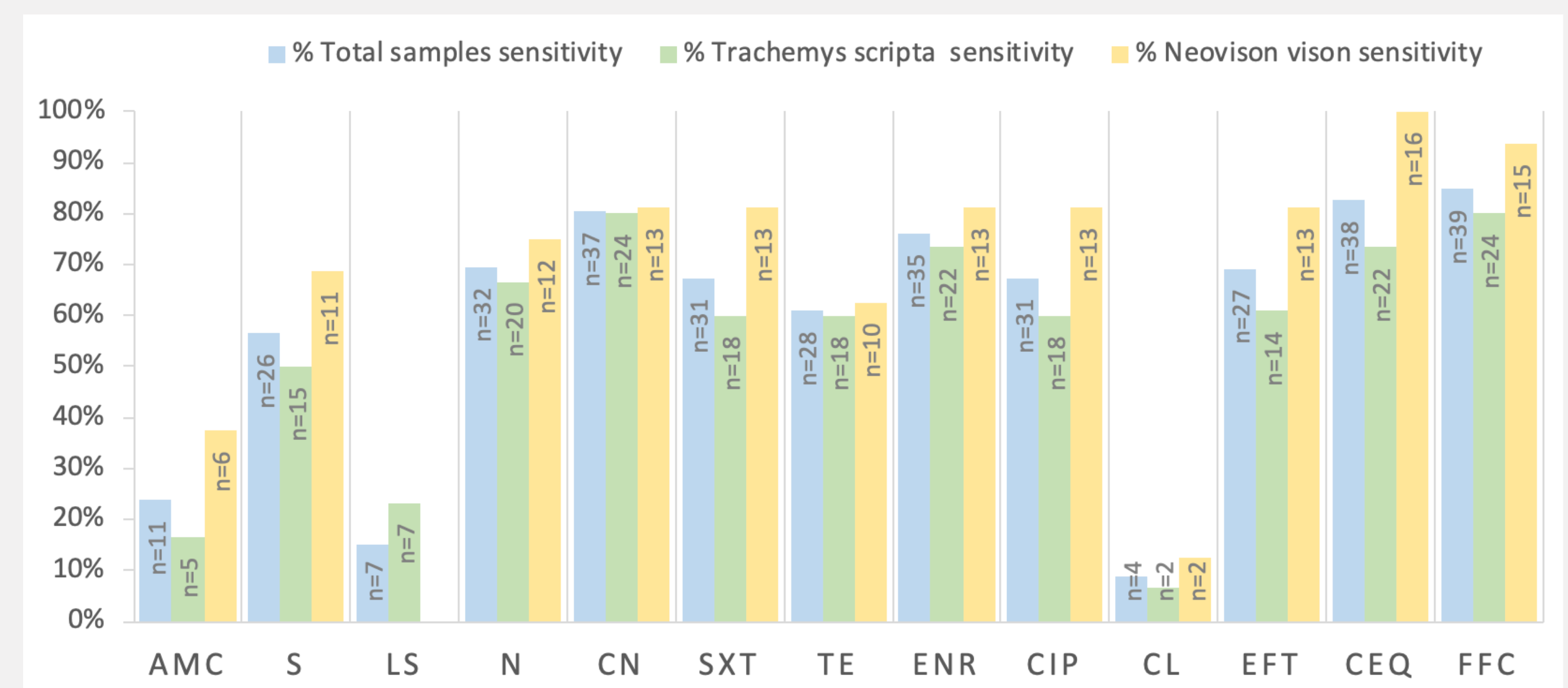
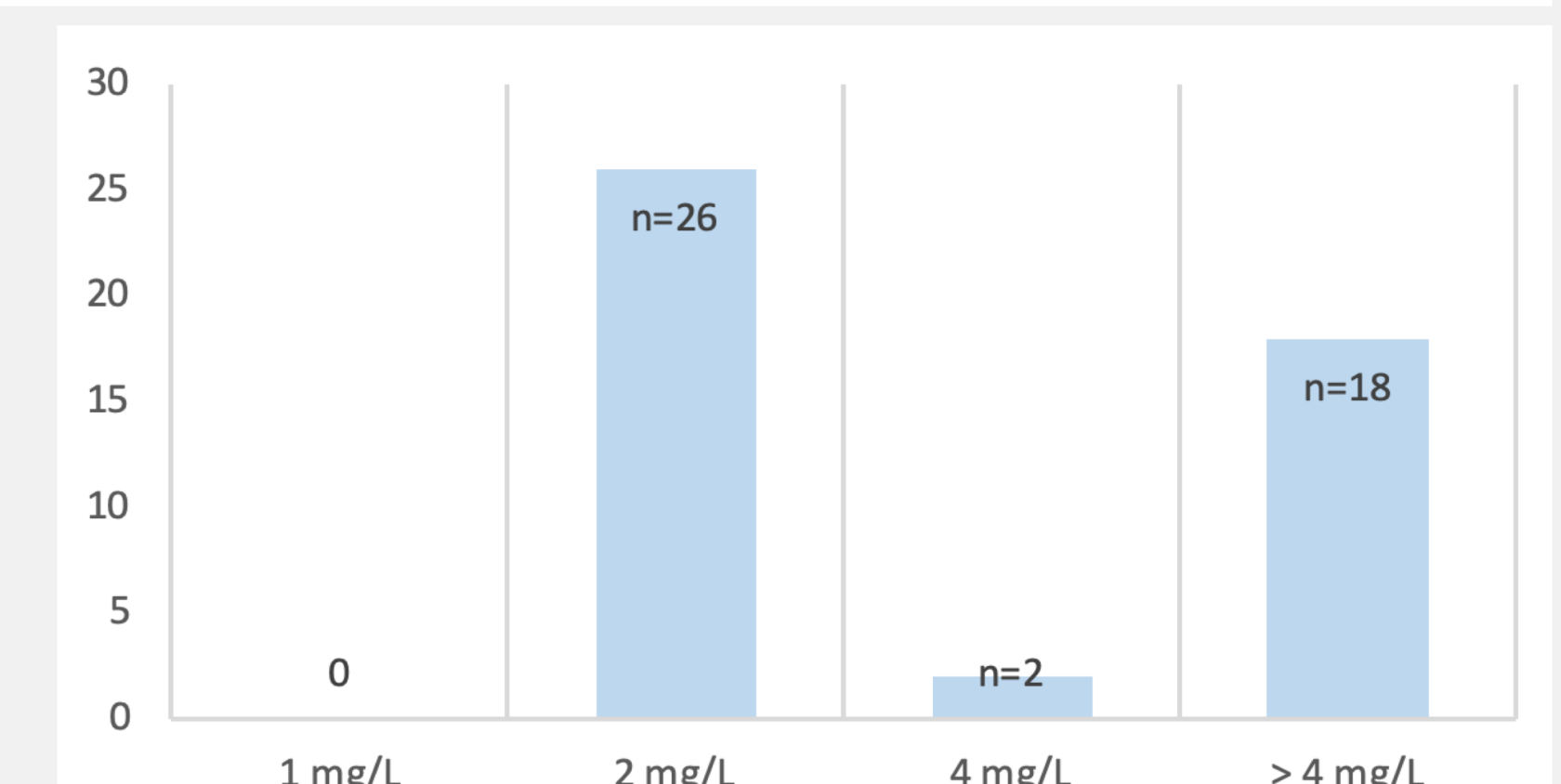


Figure 3: Minimum inhibitory concentration of the isolated bacteria



CONCLUSIONS

The invasive species that have been studied present a high prevalence of MDR bacteria with zoonotic potential. Therefore, *Trachemys scripta* and *Neovison vison* can make useful sentinels to monitor levels of AMR in rivers and the environment of studied areas.