

Florentina A. Luís Chiipepe¹; Florbela Soares²; Aires W. Mavunge³; Fernando Afonso⁴.

¹Department of Aquaculture, Faculty of Medicine Veterinary, University José Eduardo Dos Santos, florentina.chiipepe@ujes.ao florentinaalchiipepe@edu.ulisboa.pt

² IPMA/EPPO, Portuguese Institute of the Ocean and Atmosphere/Aquaculture Research Station, Av. Parque Natural da Ria Formosa, Olhão, Portugal.

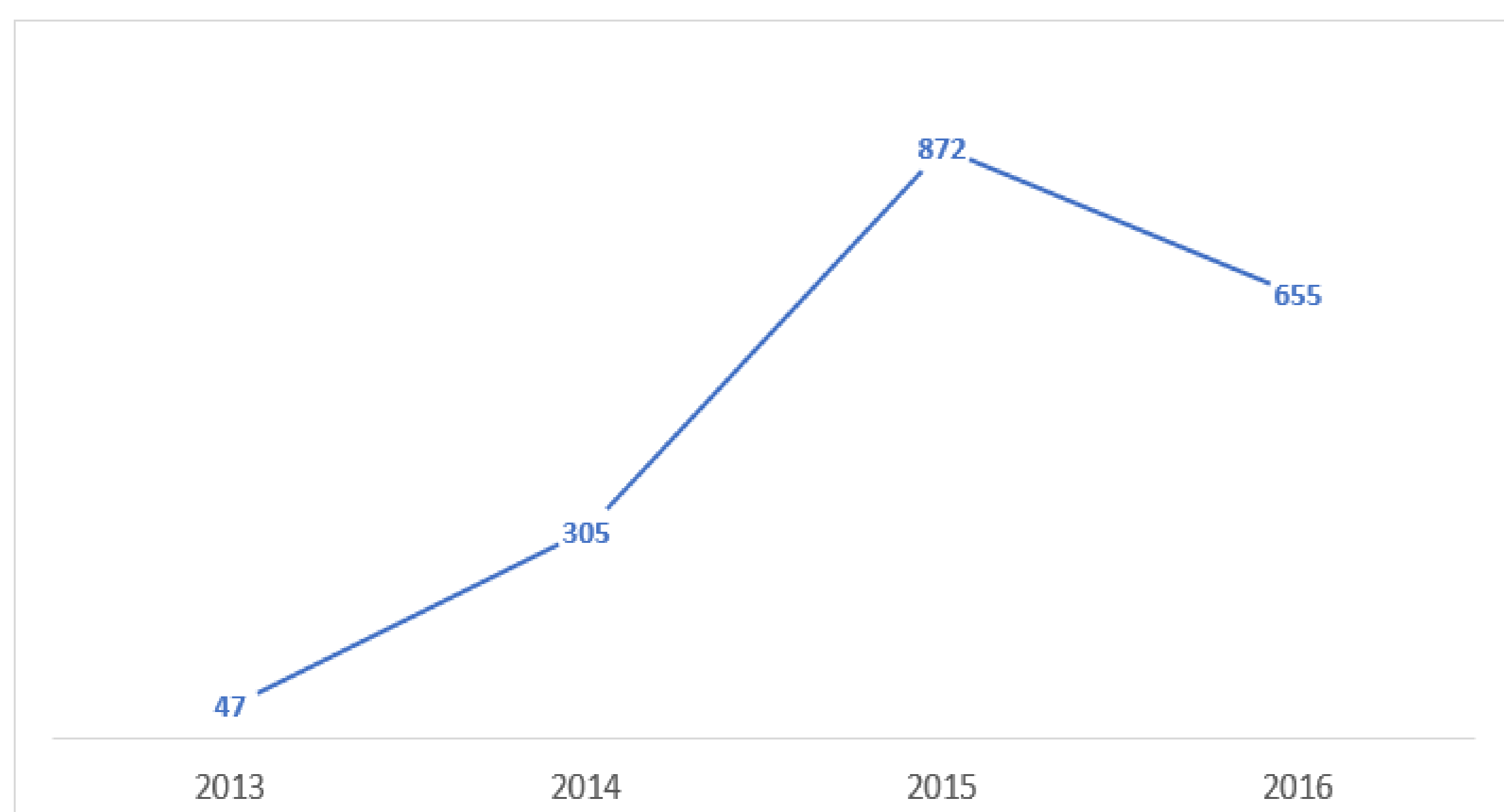
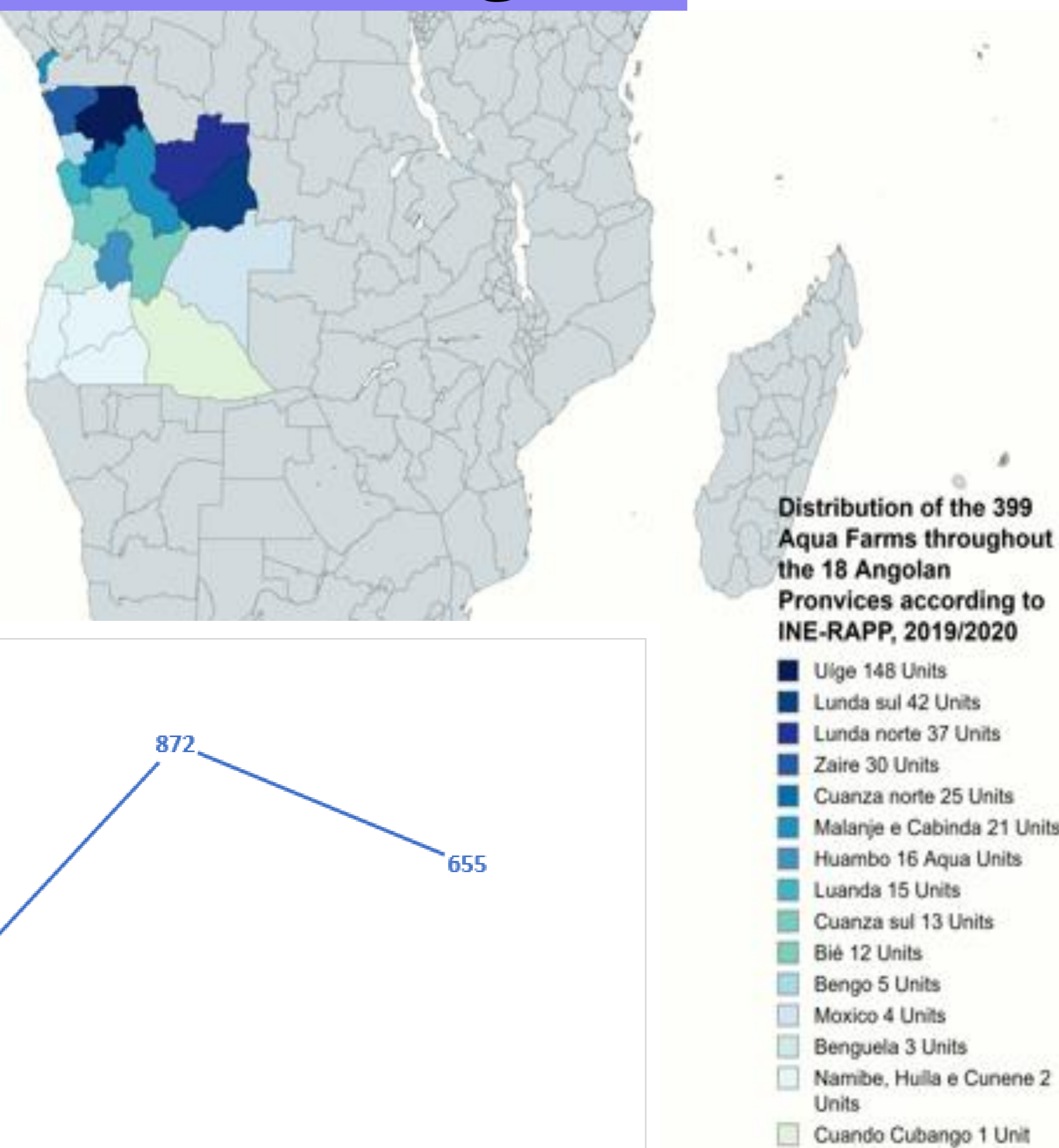
³Department of Sanity, Faculty of Medicine Veterinary, University José Eduardo Dos Santos.

⁴Department of Animal Health, Faculty of Medicine Veterinary Lisbon University.

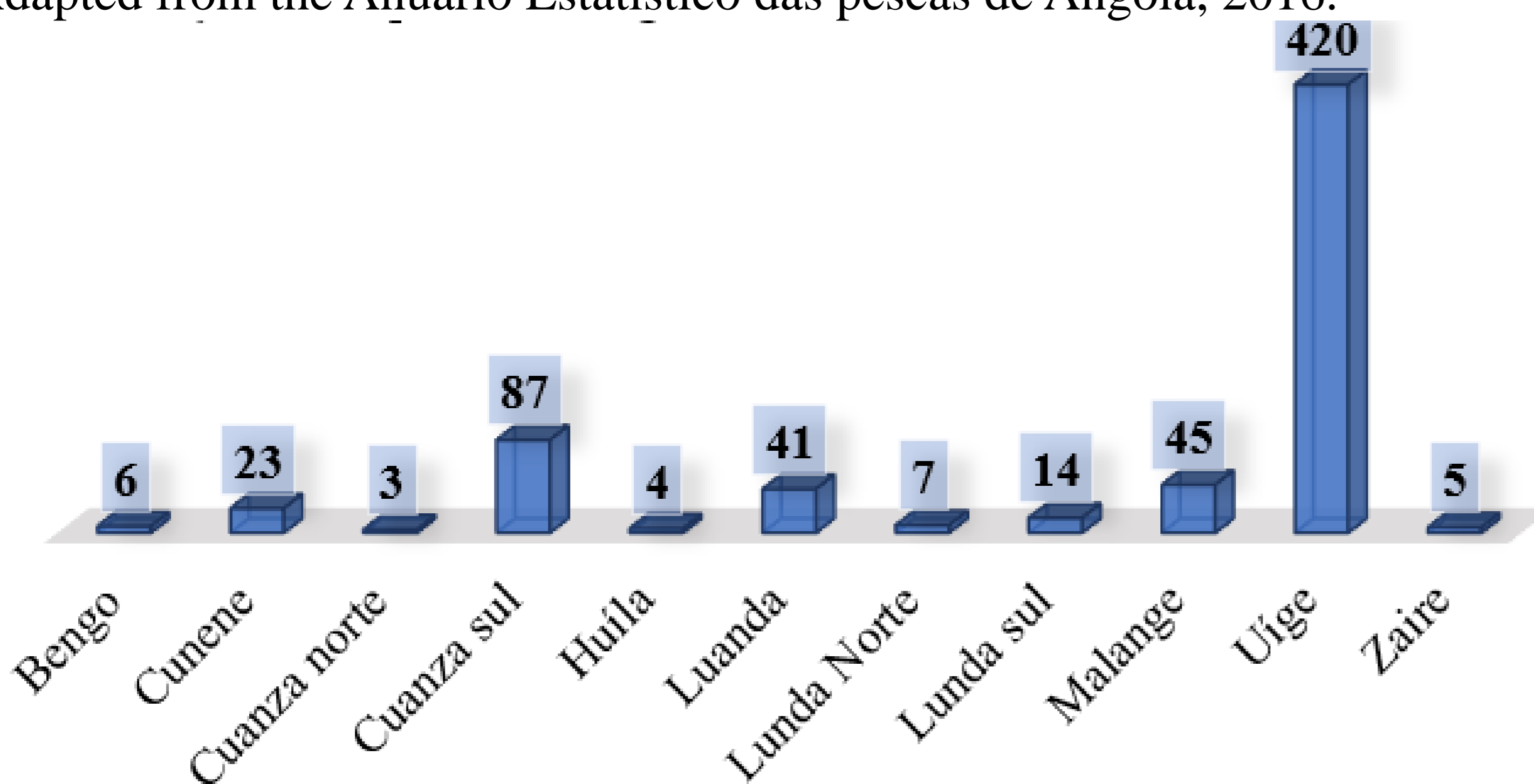
Introduction

Tilapia production is a vital industry in Angola that may contribute to economic development, food security, and employment in the country. Thanks to government efforts, there has been a noticeable increase in production over the years. However, as production continues to rise, the emergence of diseases poses a threat to the sustainability of the industry. This work presents various aspects related to biosecurity practices in tilapia culture in Angola. The authors note that while serious tilapia diseases have not been reported in the country so far, there is a lack of appropriate measures to prevent and control potential outbreaks.

Tilapia culture in Angola



Graph 1. Variation of the tilapia production in Tonnes between 2012-2016. Adapted from the Anuário Estatístico das pescas de Angola, 2016.



Graph 2. Tilapia production in Angola /Tonnes during 2016 with a total of 655T from 11 provinces. Adapted from the Anuário Estatístico das pescas de Angola, 2016.

Angolan production system

Tilapia is the most commonly farmed species in Angola, followed by the African Catfish. According to data from INE-RAPP 2019/2020, tilapia culture is primarily focused on large-scale commercialization in the business sector. However, some authors suggest that governmental initiatives have also supported production units across the country, including small-scale rural fish farming practiced by a few community farmers. In these cases, low-level technology is utilized due to a lack of training and experience among farmers (Silva 2015; FAO 2018). Tilapia culture in Angola is conducted in various facilities such as ponds, cages, concrete tanks, and polyethylene tanks, either individually or in combination, with water sourced from nearby rivers or reservoirs. Earth ponds are the most common facilities for tilapia culture in Angola, allowing for semi-intensive or intensive systems based on the financial capacity of the owner (Dombaxe *et al.*, 2015; Silva 2015; Onde & Samuel 2018).

Images 1, 2 & 3 Production facilities.



Sanitary management and disease reports

To ensure sanitary conditions in production, farmers must adhere to good management practices, including disinfection of equipment and personnel, regular monitoring of water quality parameters, predator control, and pathogen analysis in production facilities. Despite reports of disease clinical signs and mortality rates in both wild and farmed fish, there is a lack of comprehensive studies on pathogens in tilapia culture in Angola, leading to a lack of formal biosecurity protocols tailored to the local production environment.

Identified challenges in biosecurity

Challenges facing the Angolan tilapia industry include the introduction of tilapia from Brazil and Egypt without proper hazard identification, the absence of specific biosecurity programs on farms, limited knowledge of local pathogens, inadequate water quality monitoring, presence of predators and pests, the need for skilled labor and training, and institutional support for aquaculture governance. To ensure sustainable growth, profitability, and efficiency in the sector, it is crucial to conduct studies on pathogens in tilapia culture in Angola and implement biosecurity programs for safe and healthy food production.

Conclusion

The Angolan tilapia industry has to develop prevention and control disease occurrence to keep the sector growth sustainable, profitable, and efficient. Studies are fundamental on pathogens in tilapia culture in Angola to implement biosecurity programs and healthy and secure food production.

References

- Anuário Estatístico do Ministério das Pescas de Angola, 2016.
- Bondad-Reantaso, M. G. 2019. Risk Analysis in Aquaculture. <https://www.researchgate.net/publication/336285422>
- Dombaxe, D.A. M. *et al.*, 2015. Angola e os Desafios de uma Aquicultura moderna. *Angola article spatial planning.pdf* (fao.org)
- Food and Agriculture Organization of the United Nation, 2007 The Republic of Angola. *Microsoft Word – Angola FCP- sent to WWW_270508.doc* (fao.org).
- Food and Agriculture Organization of the United Nations, 2014 National Aquaculture sector overview Angola.
- FAO, 2024. Aquaculture growth potential in Angola. <https://openknowledge.fao.org/server/api/core/bitstreams/0f972d9e-7d9d-418a-af8f-004329190edf/content>
- Instituto Nacional de Estatística. 2019-2020. RAPP - Resultados dos Relatórios das explorações Agropecuárias e Aquícolas empresariais. *ANG RAAP POR 2019_2020.pdf*
- Onde, N. A. & Samuel N. 2018. Angolan Aquaculture. *p3 Angola.pdf*
- Silva, J. E. 2015. PLANNING AND MANAGEMENT FOR SUSTAINABLE DEVELOPMENT OF INLAND AQUACULTURE IN ANGOLA. <https://www.researchgate.net/publication/228589503>