

# A FRAMEWORK FOR UNDERSTANDING THE ROLE OF CULTURE IN COMMUNITY-BASED MANAGEMENT OF ARAPAIMA ARTISANAL FISHERY IN THE BRAZILIAN AMAZON

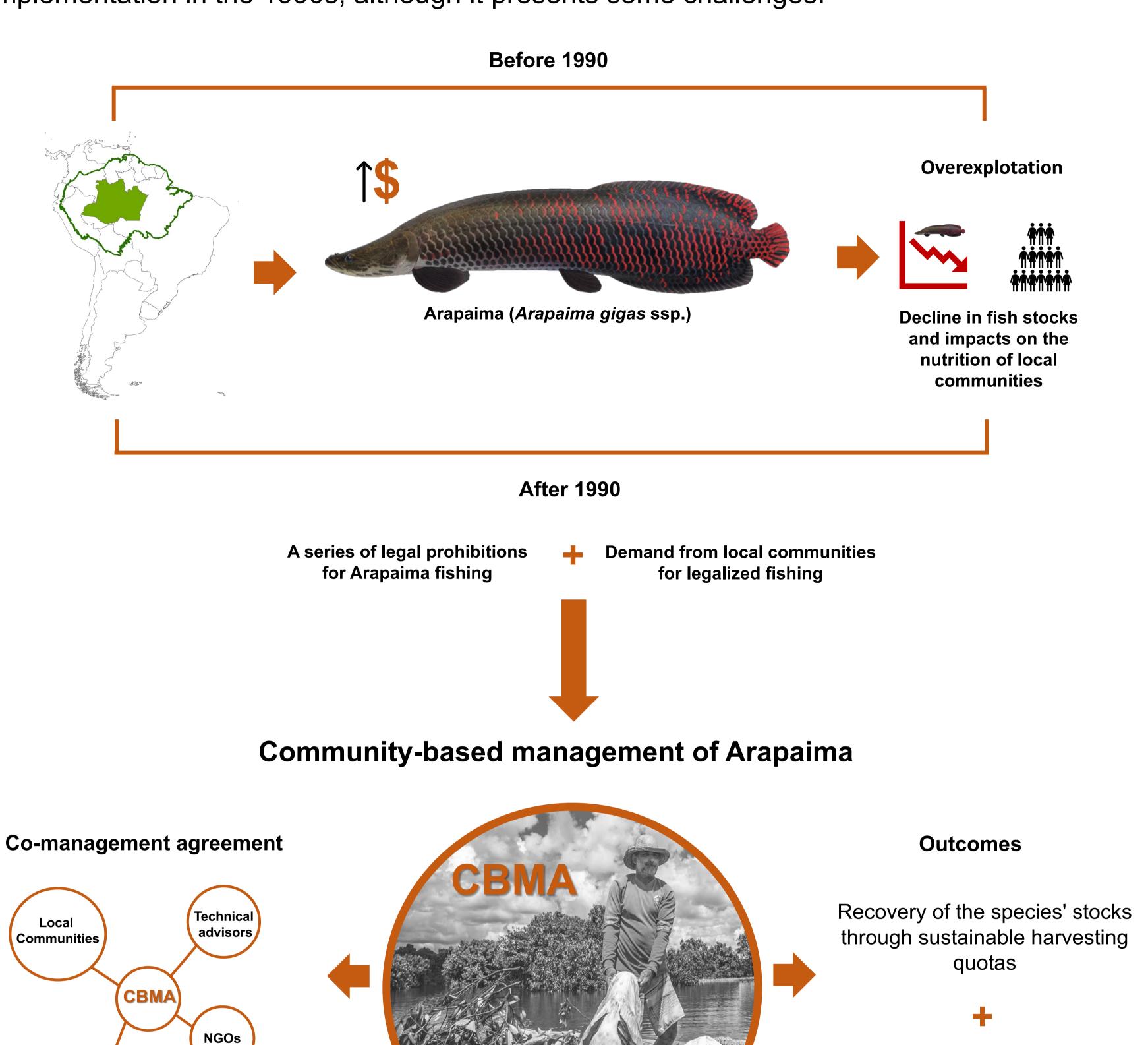


FRANCO, C. L. B. 1; ABREU, A.2; BRONDIZIO, E. S.3; SORICE, M. G.4

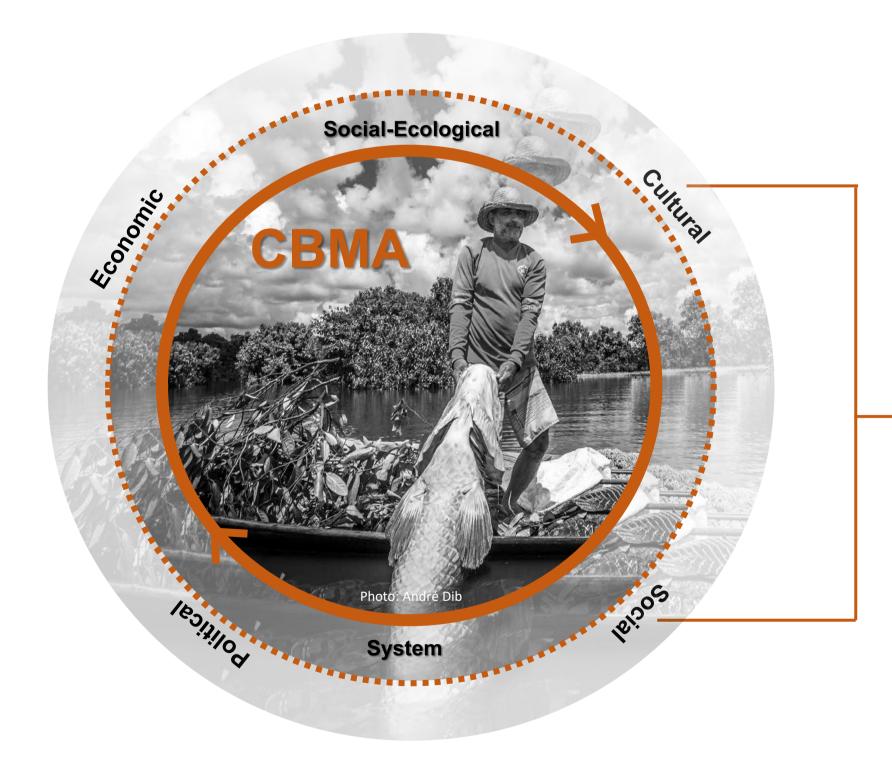
<sup>1</sup>PhD Student, Virginia Tech, Blacksburg, VA/US <u>caetano@vt.edu</u>; <sup>2</sup>PhD Student, Indiana University, Bloomington, IN/US, <u>agabreu@iu.edu</u>; <sup>3</sup> Professor, Indiana University, Bloomington, IN/US, ebrondiz@iu.edu; <sup>4</sup> Associate Professor, Virginia Tech, Blacksburg, VA/US msorice@vt.edu

### INTRODUCTION

This study aims to elaborate the conceptualization of cultural and social aspects of a research about the Community-based management of Arapaima (CBMA) in the Brazilian Amazon. The CBMA is a conservation strategy that has been successful since its implementation in the 1990s, although it presents some challenges.



#### CBMA as a Social-Ecological System



#### **Problem Statement**

Generation of social and

economic benefits for fishing

communities

- Despite its success, CBMA continues to face numerous collective action challenges;
- Although there is a great deal of research on ecological aspects of CBMA, social and **cultural dynamics** of this management system have received limited attention.

## **METHODOLOGY**

Governamenta

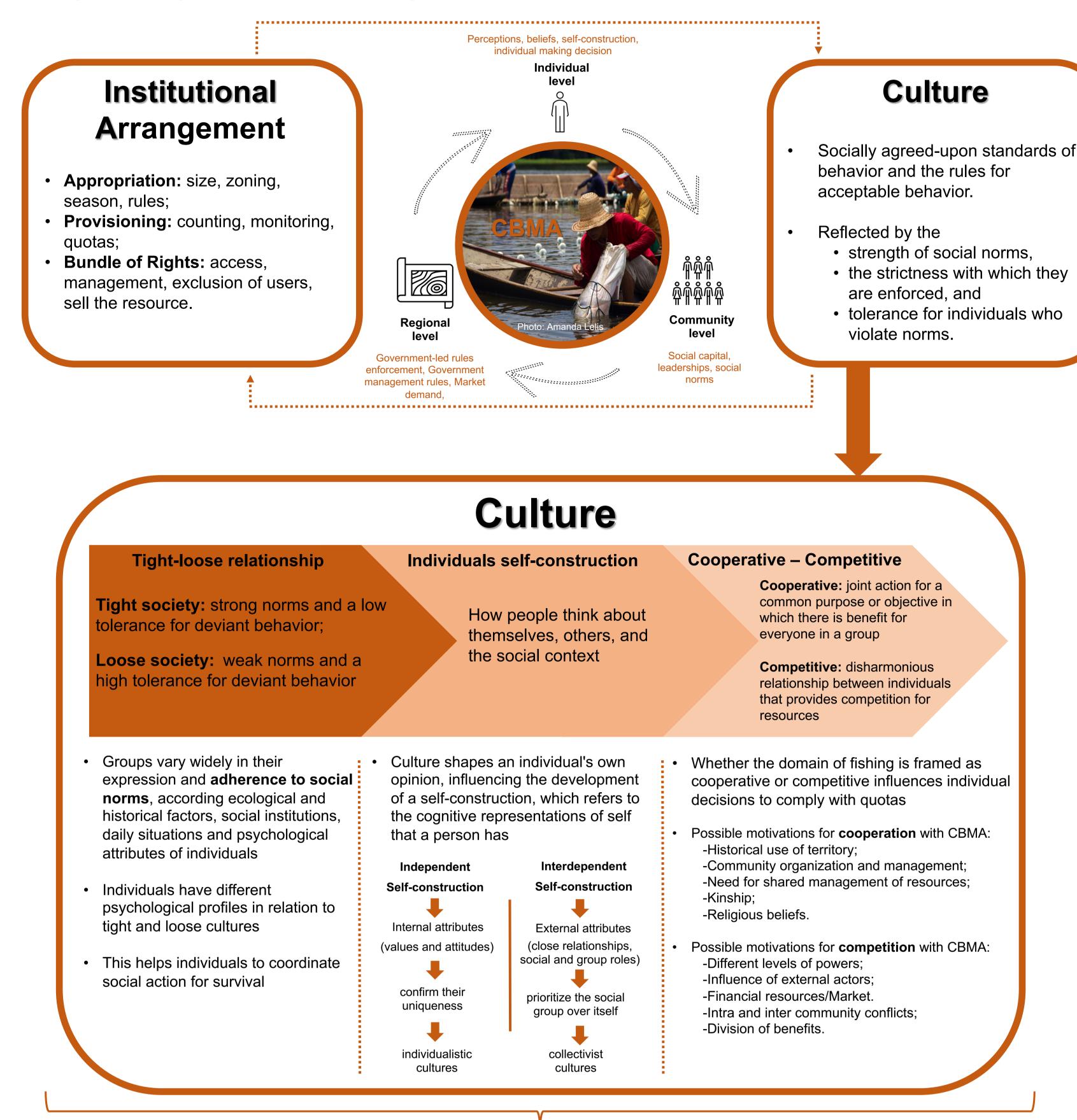
agencies



#### **OBJECTIVE**

Introduce a framework designed to explicitly incorporate the role of culture and institutional arrangements in promoting the fulfillment of Arapaima management quotas in various fishing communities.

#### THEORETICAL FRAMEWORK



#### Considering...

- CBMA is based on collaboration and cooperation between multiple actors;
- Local fishermen have defined social roles in their communities and groups;
- Fishers' identities are built from an integration of self and the culture to which they belong;
- Individuals with interdependent self-construction can be more cooperative in social dilemmas; they can change their behavior in favor of a group's harmony or sense of cohesion;
- Community culture is also a function historical resource use, occupation and collective and shared territorial management by the local populations that participate in the CBMA;



#### **Hypothesis**

Controlling for management arrangement, communities with stronger enforcement of social norms and more cooperative orientations will have lower illegal harvesting when compared to communities with weaker enforcement of social norms and with a competitive orientation toward fishing.

> Do you have comments or suggestions? Please following here! caetano@vt.edu

#### **ACKNOWLEDGEMENT**

This research was funded by the U.S. National Science Foundation, Dynamics of Integrated Socio-Environmental Systems Program (BCS-2009288).

#### REFERENCES

Amaral, E. S. R. (2009). O manejo comunitário de pirarucu (*Arapaima gigas*) como alternativa econômica para pescadores das RDSs Amanã e Mamirauá, Amazonas, Brasil. Dissertação de Mestrado. Universidade Federal do Pará, Belém. Castello, L., Viana, J. P., Watkins, G., Pinedo-Vasquez, M., & Luzadis, V. A. (2009). Lessons from integrating fishers of arapaima in small-scale

fisheries management at the Mamirauá Reserve, Amazon. Environmental management, 43(2), 197-209. Freitas, C. T. (2019). O que o manejo de pirarucu pode nos ensinar? Aspectos ecológicos, sociais e culturais aplicáveis a múltiplos sistemas

socioecológicos. Tese de Doutorado. Universidade Federal do Rio Grande do Norte, Natal. Gelfand, M. J. (2012). Culture's constraints: International differences in the strength of social norms. Current Directions in Psychological

Science, 21(6), 420-424.

Giacomin, M., & Jordan, C. H. (2020). Interdependent and independent self-construal. Journal: Encyclopedia of Personality and Individual Differences, 2319-2325.

Ostrom, E. (1990). Governing the commons: The evolution of institutions for collective action. Cambridge university press. Viana, J.P., Castello, L., Damasceno, J.M.B., Amaral, E.S.R., Estupiñan, G.M.B., Arantes, C., Batista, G.S., Garcez, D.S., Barbosa, S. (2007). Manejo

Comunitário do Pirarucu Arapaima gigas na Reserva de Desenvolvimento Sustentável Mamirauá - Amazonas, Brasil, in: Prate, A.P., Blanc, D. (Eds.), Áreas Aquáticas Protegidas Como Instrumento de Gestão Pesqueira. MMA/IBAMA, Brasília, pp. 239–261.











