Hunger Games: Science-based policy advocacy for Laguna Lake conservation through ASEAN S&T Fellowship

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Introduction

Laguna Lake is the largest lake in the Philippines and one of the major sites of aquaculture in the country. However, the lake is continuously being threatened by the growing population and harmful practices in its vicinity.

Hence, proper guidelines that are science-based and a strict enforcement of the existing policies are needed to properly address the problem in the lake and its tributaries.

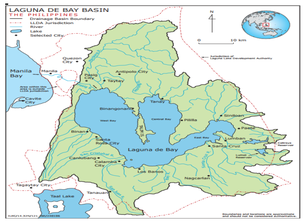


Figure 1. Laguna Lake basin (Santos-Borja & Nepomuceno, 2006)

Methodology

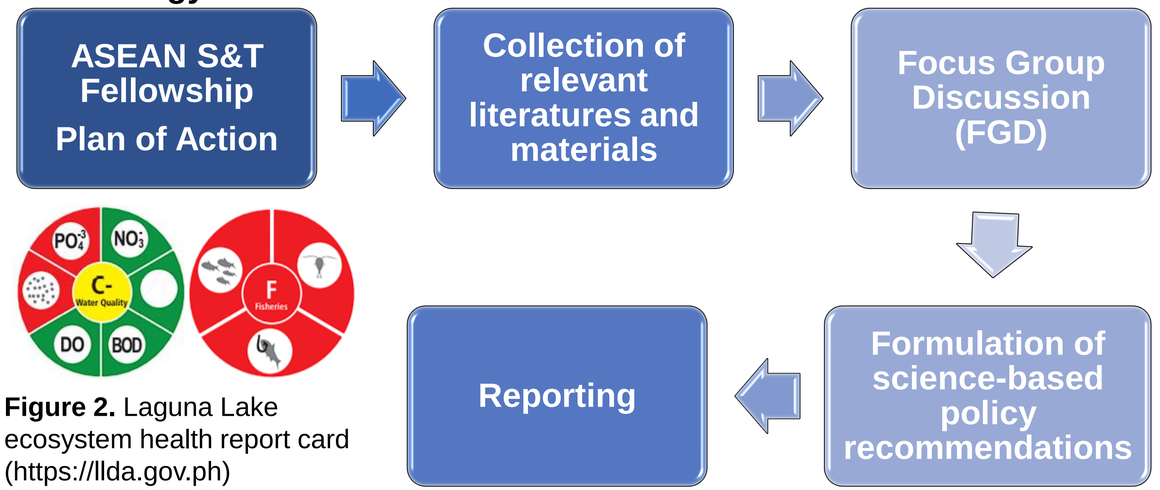
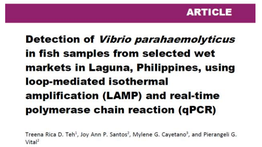


Figure 2. Laguna Lake ecosystem health report card (https://llda.gov.ph)

Results

Science-based policy recommendations for Laguna Lake conservation

- Determination of the microbial load of the lake and identifying the presence of pathogenic and microorganisms
- Regulating the effluents of the different sectors present in and within the vicinity of the lake
- Establishment of better water balance and water quality monitoring systems
- Determination of how the effluent, water balance, water quality, and lake chemistry, individually and synergistically, affect the growth of various microorganisms
- Educating the various sectors on how their activities affect the lake, and the food supply, and how they can contribute to ensuring food safety and security
- Reassessing the current and existing policies related to the effluent, water balance, and aquaculture, and determining ways on how it can be further improved and strongly imposed
- Funding research and development undertaking related to Laguna Lake and involving scientists and experts to create science-based policy recommendations


ARTICLE

Detection of *Vibrio parahaemolyticus* in fish samples from selected wet markets in Laguna, Philippines, using loop-mediated isothermal amplification (LAMP) and real-time polymerase chain reaction (qPCR)

Treena Rica D. Teh[1], Joy Ann P. Santos[2], Mylene G. Cayetano[3], and Pierangeli G. Vital[4]

Figure 3. Publication in peer-reviewed journal (Teh et al., 2020)

ASEAN S&T Fellowship

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Conclusions

The science-based policy recommendations submitted and presented to corresponding agencies and stakeholders, supported by FGDs, literature reviews, and publication, shall address environmental problems of Laguna Lake including deterioration of water quality, siltation and sedimentation, invasion of nonnative species, algal blooms, and fish diseases for proper lake management and conservation.

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Teh TRD, Santos JAP, Cayetano MG, Vital PG. (2020). Detection of *Vibrio parahaemolyticus* in fish samples from selected wet markets in Laguna, Philippines using loop mediated isothermal amplification and real-time polymerase chain reaction. Philippine Science Letters. 13: 84-91.