

14.2.1. Batangas State University – The National Engineering University offers educational programmes on fresh-water ecosystems (water irrigation practices, water management/conservation) for local or national communities.

Our marine research center - Verde Island Passage Center for Oceanographic Research and Aquatic Life Sciences (VIP CORALS) recently concluded three (3) research projects on green tide blooming species and backyard tilapia farming.

The Understanding Physiological Vulnerability of *Ulva* spp.: Implication to Green Tide Blooms project reiterates that eutrophication coupled with increased temperature and high light conditions produces this type of bloom. These eutrophication processes were ridge-based from sewage, agricultural fertilizers, livestock wastes, stormwater drainage, and aquaculture through different types of freshwater ecosystems such as rivers, lakes, and others. Different Information, Education, and Communication (IEC) materials were produced to disseminate and increase awareness about the research project and the implication of eutrophication to produce green tide blooms. This was disseminated within our partners from Local Government Units (LGUs).

In addition, another completed research project on backyard tilapia farming promoted sustainable and efficient processes and mechanisms for utilizing water resources to maximize the production of tilapia. These projects can produce a production rate exceeding the national level.

Furthermore, a recently completed research project was able to design and develop a solar-powered mobile irrigation system for rice paddy in Lobo, Batangas to provide an alternative but reliable solution to irrigation due to the destruction of water intake of irrigation facilities in low land from the typhoon.