Better World Showcase 2018

Demonstrating how the Faculty of Science & Engineering is Making a Difference

Conserving Philippine Biodiversity by Understanding Big Data (COPIOUS)

Initiative

COPIOUS is a collaborative project aiming to advance how Philippine biodiversity information is being curated and analysed. Information on Philippine biodiversity is scattered in different sources, stored using different formats and fragmented due to information silos. In addition, data published in the literature remain unexplored. As a result, most of the information on Philippine biodiversity remains inaccessible, hampering the timely formulation of environmental policies and the discovery of new natural products that can potentially provide medicinal benefits.

This project combines the domain expertise of Philippine partners with the text mining research carried out by the National Centre for Text Mining to address information overload and overlook in biodiversity. By integrating, semantically annotating and facilitating interactive search over different types of information (e.g., taxonomic, occurrence, ecological), knowledge on Philippine biodiversity becomes accessible to a range of users, enabling them to carry out predictive analysis on species distributions. The knowledge extracted, together with observed data, helps in supporting the Philippine government’s efforts on conserving the country’s natural resources. This in turn can translate to benefits for the Philippine population in terms of ecosystem resilience and improved public health. In addition, it creates a unique digital biodiversity hub in the Philippines.

How Sophia, Riza, Nhun and Axel have Made a Difference

COPIOUS has created resources, tools, and a search system which supports modelling and predicting the distribution of Philippine species of interest. One example concerns the fish *Plectropomus leopardus*, whose population has shrunk significantly due to widespread illegal fishing. Another example is the *Dipterocarpaceae* family of forest trees which are economically and ecologically important but recently have been over-exploited. The tools and resources developed in COPIOUS are currently being evaluated by experts and policy-makers in the Philippine government’s Biodiversity Management Bureau and thus will inform the design and implementation of new environmental conservation programmes.

Vote for the person or project you feel is doing the most to Make a Difference

http://www.nactem.ac.uk/copious/