THE EDUCATION UNIVERSITY OF HONG KONG
FACULTY OF LIBERAL ARTS AND SOCIAL SCIENCES

Impact Case Study Prize
for the Dean's Research Fund 2020-21

Brief Introduction of Awardee's
Impact Case Study and Future Research/KT Development

Awardee (Dept):	Dr Man Yu Bon, Assistant Professor (SES)
	Prof Wong Ming Hung, Advisor (Environmental Science) (SES)
	Dr Mo Wing Yin, Lecturer, OUHK
Impact Case Study:	Development of high grade pellets using food wastes for safe and quality fish production

A. *Briefly introduce your impact case study for which you have received the prize.*

Food contamination and waste disposal are two major global environmental issues. Most of the food waste (3600 tonnes/day) generated in Hong Kong are ended up in our overloaded landfill sites. This is undoubtedly not a sustainable management option for food waste. In this impact case study, our team has successfully developed fish feed pellets supplemented with recycled food waste for growing freshwater and marine fish.

Compared with the commercial feeds, the food waste-based feeds could save up 28.5% (2017), 24.5% (2017), and 28.6% (2019) of the total production cost for Nile tilapia (*O. niloticus*), jade perch (*S. barcoo*), and Sabah giant grouper (*E. fuscoguttatus x E. lanceolatus*), respectively. Moreover, the fish products are safe for human consumption with acceptable levels of pollutants such as heavy metals and polycyclic aromatic hydrocarbons. There is great potential for using food waste-based feed as an alternative to commercial feeds for cultivating both freshwater and marine fish.

B. *How you used/will use your prize and perhaps its usefulness to your research / KT development?*

The awarded fund will be used for further development of high grade fish pellets, by adding supplements (such as Chinese medicinal herbs, enzymes, yeast, biochar, etc.) into food waste for aquaculture.

C. *Expected research/KT outcomes/outputs/impacts arising from this prize.*

It is expected that one/two SCI paper/s can be published. It is also hoped to generate preliminary data to strengthen an application of Research Grants Council - General Research Fund.