CAN THO UNIVERSITY
FACULTY OF ENVIRONMENT AND NATURAL RESOURCES

DEVELOPMENT OF A METHOD FOR MANGROVE HEIGHT CALCULATION BY USING FLYCAM TECHNOLOGY

SILVICULTURE ENGINEER THESIS

INSTRUCTED BY   **STUDENT**
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SUMMARY
Forest is a very precious natural resource, it is known not only for its commercial value but also as green lung of our Earth which allows to balance the natural environment and provides people with the freshest living space. Forests are composed of plants, they can absorb carbon dioxide and store it in form of carbon in the forest basin. The most important basin is woody plants.

The height of plants is one of the major factors to research, specify and manage forests. In order to support mangrove height identification, our team has developed a method to calculate the height of mangrove trees using Flycam (UAV) technology.

Photos taken by Flycam (871 photos, 4.8 cm resolution) were extracted from GIZ data dated 31st October 2016. The study was conducted in Huỳnh Kỳ hamlet, Vĩnh Hải commune, Vĩnh Châu district, Sóc Trăng province. The method for mangrove height calculation using Flycam is a multi-step work. The results show that the data computed from Flycam can be used to calculate the height of mangrove trees with accuracy ranging from 79% to 92%. The estimated average plant height in the observed area is about 11.53 m. From that, it is declared that the application of Flycam for monitoring and managing the height of plants is very feasible.