

# FIRST RESEARCH SYMPOSIUM THE OCEAN UNIVERSITY OF SRI LANKA

## ABSTRACTS

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# Comparative Systematic Analysis of Proxy to Indicate Younger Dryas Cooling in Late Pleistocene in Sri Lanka

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A controversial theory that suggests an extraterrestrial body crashing to Earth almost 12,800 years ago caused the extinction of many large animals and a probable population decline in early humans is gaining traction from research sites around the world. The Younger Dryas Impact Hypothesis, controversial from the time, it was presented in 2007, proposes that an asteroid or comet hit the Earth about 12,800 years ago causing a period of extreme temperature variation that contributed to extinctions many species of megafauna. As focusing study for developing onshore Digital Elevation Model (DEM) to predict paleo sea level drop around 12800 years before present in Sri Lankan coastal based on comparative systematic analysis of proxy to indicate Younger Dryas cooling in late Pleistocene. Model of DEM implement from images of Unmanned Aerial Vehicles (UAV) platform which able to examine the location images of beach rock & eroded cut in an enfield coastal sandy soil along the coastline of Sri Lanka. Resulting of systemic comparison in modern data platform which evaluated from proxy (  $pCO_2$ ,  $SST_{Mg/Ca}$ , alkalinity), images of UAV in between carbon dating relevant to quaternary research in sri lanka and milankovitch cycle, able to reveled as conclusion, sea level fluctuation (26000ybp ) of 7.5 meters and has been reduced to 2.5 m in Younger Dryas cooling period of late Pleistocene Sri Lanka.

**Key Words** - Pleistocene, Sri Lanka, Proxy, Sea Level, DEM-UAV