ASSESSING WAVE DIRECTION ON SRI LANKAN COASTS BY AERIAL PHOTOGRAPHY

I.F.W. Jayawardena
Lanka Hydraulic Institute Ltd.

Instrumentation required for accurate assessment of directional properties of ocean wasves requires systems which are very expensive. Also, past experience indicates that instruments moored on the east coast of Sri Lanka are in particular prone to damage and loss.

In this paper an attempt is made to use aerial photographs taken from 1956 to-date to assess direction and to correlate the wave lenghts obtained with periods already obtained from spectral measurements.

When wave directions did not coincide with directions given by the monsoonal wind systems, namely those from the Bay of Bengal and the Indian Ocean, an attempt has been made to explain this difference by refraction and diffraction phenomena taking the bathymetry of the area into account. An estimate of crest lengths is also made as these may prove to be useful in energy extraction processes of the future and in general model study requirements.

Reference

Peter L. Chistiansen; Fifferaction of Gravity Waves by Large Islands
14th Coastal Engineering Conference Proceedings