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STORM SURGE FORECASTING (AN APPLICATION OF JELESNIANSKI TECHNIQUE TO THE EAST COAST OF SRI LANKA)

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A significant part of the damage caused by a cyclone is associated with storm surges, that accompany the cyclone.

Accurate prediction of storm surge is vital for purposes of planning precautionary measures.

Nomograms prepared by C. P. Jelesnianski are used to forecast the storm surge heights at the east coast of Sri Lanka. These nomograms are based upon a "standard storm" passing over a "standard basin". The values obtained from these nomograms are then corrected for better agreement with actual storm and basin.

Depth profile correction factors for the east coast of Sri Lanka were found and making use of these values the standard basin values are corrected to the actual basin values of the east coast.

References

1. Jelesnianski, C. P. (1965). A numerical calculation of storm tides induced by a tropical storm impinging on a continental shelf. *Monthly Weather Review*, **93**, 343-358.
2. Jelesnianski, C. P. (1966). Numerical computation of storm surges without bottom stress. *Monthly Weather Review*, **94**, 379-394.
3. Jelesnianski, C. P. (1967). Numerical computation of storm surges with bottom stress. *Monthly Weather Review*, **94**, 740-756.