

P-I-2

A Hydrometeo Atlas of 25 year measurements along the Flemish coast

ir G. Dumon, Waterways and Maritime Affairs Administration – Coastal Waterways (B)
ir M. Van Vooren, Haecon n.v. (B)
ing Ph. Hyde, Haecon n.v. (B)
E-mail: guido.dumon@lin.vlaanderen.be

Since end 1977 wave-, wind- and tidal observations have systematically been executed in the Belgian Coastal Area and on the Belgian Continental Shelf. The measuring results have periodically been converted into useful statistical information. During the years the measuring sensor data was considerably extended and evolved. In 1986, after ten years intensive measuring, a global overview of the results has been drawn up and these results have statistically been converted in the shape of a Hydrometeo Atlas.

Recently the existing Hydrometeo Atlas has been actualised. The project has started with a thorough study of the statistical methods applicable on the different data types. This has been executed by simulation and fitting of various statistical distributions. Once the suitable methods were selected, various modules have been developed which interrogate directly the hydrometeo data (25 years data). The following statistical modules are developed:

- Extreme value computation of wave heights
- Statistical fit of the data on the theoretical Weibull distribution. Techniques are developed to calculate the range of accuracy of the results.
- Peak over Threshold (POT) method: statistical fit of values that are exceeding a given threshold
- Calculation of the return period
- Regression analysis
- Analysis of tidal data (harmonic analysis, Fourier analysis,...)

The former Hydrometeo Atlas has been replaced by an interactive CD-ROM, by which the most recent media- and presentation techniques are used. The files holding the results are organised in Web-based HTML folders. The CD-ROM can be accessed by means of a Web-browser.

The Hydrometeo Atlas can also be consulted via the AWZ website.