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Vegetation map of the polder of Kruibeke, Bazel and Rupelmonde

B. Vandevoorde

Institute for Nature Conservation

The Sigmaplan is a protection plan against inundations from the Zeeschelde and its tributaries. Safety measures includes elevation of the dikes and the creation of controlled inundation areas. The polder of Kruibeke, Bazel and Rupelmonde (KBR) is the last and largest (600 ha) planned controlled inundation area. Construction works started in 2002. Unlike the other inundation areas its secondary function will be nature development rather than agriculture. In view of future developments and to establish starting conditions a vegetation map of the polder was made. A network of piezometers was installed in 1996 and expanded in 1998 to investigate the groundwater quality and regime.

In june-september 2000 a vegetation relevé was made in each vegetation unit (614 in total), according to the reductionistic method. TWINSpan was used to establish a vegetation typology. Eighteen vegetation types were distinguished: 9 types of woodlands and 9 types of grasslands. Several hydrological variables were linked to the vegetation types. Groundwater level and development time are the principal determinants for the woodlands. The *Carici elongatae-Alnetum* and the *Alno-Padion*, respectively on stands with the highest and lowest groundwater level and with the shortest and longest development time, are the two (sub)climax vegetations towards which the other woodland types e.g. the several poplar stands and clearances will evolve. The *Lolio-Cynosuretum* and the *Lolio-Potentillion* can be considered as the (sub)climax grassland vegetations. Management and the inundation regime are the most important determinants. In most cases biological value of the grasslands deteriorates due to the applied management.