

THE ENDIS-RISKS PROJECT: ENDOCRINE DISRUPTION IN THE SCHELDT ESTUARY – DISTRIBUTION, EXPOSURE AND EFFECTS

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The first indications of possible effects of endocrine disrupting substances and the presence of these substances in the Scheldt Estuary have recently been published. The industrial areas of Ghent and Antwerp are to a large extent responsible for this pollution. Therefore, there is an obvious need to investigate the occurrence of endocrine disruption in the Scheldt Estuary. In addition, a detailed knowledge of the distribution and long-term effects of these substances is needed in the framework of future-oriented policy measures at the national and European level. The Endis-Risks project, a multidisciplinary consortium between five different research institutes, will evaluate the distribution, exposure and effects of endocrine disruptors in the Scheldt Estuary. An extended list of endocrine disruptors and the *in vitro* estrogen and androgen potency will be analyzed in water, sediment and suspended solids. In addition, body burdens of these endocrine disruptors will be analyzed in biota (mysid shrimp and gobies) and linked with *in situ* biomarker responses and population effects in resident mysid populations. Field samples and *in situ* studies will run over four years (three campaigns per year). The field study will allow an identification of potential problem chemicals with endocrine disruptive activity in the Scheldt Estuary. These chemicals will be further evaluated through laboratory exposures with mysid shrimp to evaluate the acute and chronic effects on endocrine regulated processes in these animals (energy and (ecd)steroid metabolism, vitellogenesis, specific protein expression,...). The results of laboratory and field studies will be linked to come to an integrated risk estimation for endocrine disruptors in the Scheldt Estuary.

Key words: Endocrine disruption; *Neomysis integer*; Scheldt Estuary; Life history.