ABSTRACT

Zeezand en meer bepaald zand gewonnen op het BCP vormt een belangrijke bron van natuurlijke rijkdommen. Sinds enkele decennia heeft de zandwinning op zee zich dan ook tot een belangrijke economische activiteit ontwikkeld. Daarenboven mag gesteld worden dat de winning op een duurzame manier gebeurt. Naast grote volumes nodig voor de kustverdediging, wordt het zand aangewend voor allerlei toepassingen in de bouwsector. Dit op basis van zijn intrinsieke kwaliteiten en diversiteit in kwaliteiten afhankelijk van de winplaats. Belangrijk is dan ook deze diversiteit in winplaatsen te verzekeren op lange termijn.

Le sable marin et plus particulièrement le sable extrait sur le Plateau continental de la Belgique est une source importante de ressources naturelles. Depuis quelques dizaines d'années, l'extraction de sable en mer s'est fortement développée et est devenue une activité économique importante. Par ailleurs, on peut affirmer que l'extraction se fait d'une manière durable. De grands volumes de sable sont nécessaires pour la défense de la côte mais le sable est en outre utilisé pour différentes applications dans le secteur de la construction. Le sable est apprécié en raison de ses qualités intrinsèques et des différentes qualités en fonction du lieu d'extraction. Il importe donc d'assurer cette diversité selon les lieux d'extraction à long terme.

INTRODUCTION

Mineral materials are essential to keep our society running. Supply of mineral materials is a social necessity for present and future generations.

Particularly for building and fill sand four supply sources are distinguished to satisfy this need:

- primary surface minerals extracted from land/river
- sand extraction on the BCP
- secondary minerals/soil aimed at closed material cycles
Sand extraction on the BCP is in particular an answer to meet the need for building sand. The concrete industry (industry of ready-mixed concrete and concrete prefab products) is the main consumer.

**PREJUDICES**

Sea-dredged sand is distinguished from land-extracted sand by the presence of shells and salt. Prejudices being a real barrier in the past for general applications have now disappeared. This is mainly thanks to the product specifications such as NBN EN 206-1, containing the requirements for concrete production. No restrictions are imposed on the components, only on the application of the product (concrete) and its resulting restrictions. For example, for armed concrete it is required that the chloride content is restricted to 0.4% of the cement weight. The concrete producer has to prove this by means of the chloride balance of the constituents.

**QUALITY**

Furthermore sea sand dredged on the BCP is characterized by its pureness, constancy and the absence of fines. As a consequence the sand can be used almost unprocessed. This is an important trump card for the producer (concrete / asphalt) who considers material constancy of paramount importance in order to produce an end product of constant quality. Like all building materials the sand producer has to acquire a CE conformity certificate to be authorized/able to sell its product on the European market. On top of that all producers of sea sand extracted from the BCP hold the BENOR-label. This label contains a certificate granted by a third party on a voluntary basis.

**APPLICATIONS**

Sea sand dredged on the various extraction zones of the BCP vary from fine to middle coarse sand. The coarse fraction in the sand mainly consists of a shell fraction. The various sand qualities are won on specific zones on the sand banks.

All in all, a distinction is made between three sand types:

- very fine sand (0/1 mm) used as fill sand and sand for asphalt production.
- fine sand (0/2 mm) for mortar, concrete and asphalt production, drainage sand and beach suppletion.
middle coarse sand (0/3 mm) for concrete production. Within the concrete business a gradual replacement is noticed from coarse sand types to middle coarse sand types extracted from the BCP. This type of sand represents yet > 60 % of the sand extraction on the BCP.

Important for this industry is knowledge of the location of the various extraction zones in function of the various qualities (applications!).

**AVAILABILITY**

Considering the major part of the coarse sand type, it is primordial that fulfilling the needs can be guaranteed in the long term. An important step was the addition of extraction zone 4 to the existing extraction zones. A number of companies have applied for a concession on this zone 4 which will hopefully meet our expectations and will result in a further geographical spread of sand extraction and, as a consequence, a spread of its effects.

Besides, it is of great importance that the existing extraction zones are exploited to a maximal extend. By way of precaution, here and there some zones have already been closed. We are questioning party to reconsider this principle in function of the results of various impact studies on the long term effects of sand extraction at sea.

Finally, we need to remain observant for the environmental objectives imposed by Europe in order to avoid conflicts with the various actors on the BCP, especially sand extraction.