

Traditio et Innovatio

**PARIS Aug. 27-31, 2012** 6th International Conference on Scour and Erosion

## Proposals for Future Index Parameters for Erosion Control Products

Jan Olschewski Stefan Cantré Fokke Saathoff

39.65

© 2012 UNIVERSITÄT ROSTOCK | CHAIR OF GEOTECHNICS AND COASTAL ENGINEERING







© 2012 UNIVERSITÄT ROSTOCK | CHAIR OF GEOTECHNICS AND COASTAL ENGINEERING





### **Erosion Control Products (RECP) versus Erosion Control Systems (ECS)**

RECP

• ECS







#### Index parameters versus characteristic index parameters



Indices of a GBR-C

VS.

Characteristic indices of a GBR-C







#### Index parameters with regard to erosion

- Erodibility as a (characteristic) index for soils
  - $\rightarrow$  Briaud et al. (2001)
  - → Hanson (1990a/b, 2004)
- Index parameters to describe the erosion control capacity of RECPs
  - → ECTC Soil Loss Ratio (Method 2), Average Depth of Soil Loss (Method 3)
  - $\rightarrow$  ASTM Several index and performance tests
  - $\rightarrow$  SKZ / LWG Several index and performance tests

### $\rightarrow$ Until now no <u>charcteristic</u> index resp. test method has been found











### **Erosion control capability of RECPs**

Erosion control capability

$$\mathbf{E} = \frac{\mathbf{\varepsilon}_0}{\mathbf{\varepsilon}_{\mathbf{x}}}$$

 $\epsilon_0...$  Eroded amount of soil without protection  $\epsilon_x...$  Eroded amount of soil with protection

Corresponding rating scale







#### Preventing of single erosion processes through RECPs



© 2012 UNIVERSITÄT ROSTOCK | CHAIR OF GEOTECHNICS AND COASTAL ENGINEERING







Finding characteristic indices for RECPs or ECS' is one of the central topics within the erosion control research

Characteristic indices for erosion control products have not yet been defined



Küstenwasserbau

Characteristic indices are essential for the development of suitable tests

© 2012 UNIVERSITÄT ROSTOCK | CHAIR OF GEOTECHNICS AND COASTAL ENGINEERING



## Je vous remercié de Votre attention.

### Vielen Dank für Ihre Aufmerksamkeit.

### Thank you for your attention.