

Sommersemester / *Summer Term 2015*

## BayCEER Kolloquium

Vortragsreihe Ökologie und Umweltforschung  
*Lecture series in Ecology and Environmental Research*

**Donnerstag 18.06.2015, 12:00 Uhr, H6**

Anschließend Postkolloquium mit Mittagsimbiss im Foyer H6

### Dr. Jan Berend Stuut

Royal Netherlands Institute for Sea Research  
and Center for Marine Environmental Sciences, Bremen

## Mineral Dust - A Key Player in the Earth System

As a marine geologist, I have a rather biased view on mineral dust, of which I would like to present a few examples in the presentation, focussing on past Saharan dust in marine sediment cores as well as modern dust deposition and its marine environmental effects on the Atlantic Ocean. On a geological time scale the seasonal/monsoonal precipitation in sub-Saharan Africa has shifted zonally, causing abrupt and persistent droughts whenever the summer rains were concentrated further South than at present. These wet-dry alternations are recorded in the marine sediment archive where aeolian dust and fluvial mud are deposited depending on the environmental conditions on land. In addition to the natural variability, land-use plays an active role in the mobilisation of soils as well.

In this talk I will give some examples of studies carried out on deep-sea sediments retrieved off NW Africa with the aim to reconstruct palaeo-environmental conditions in the source area(s) of Saharan dust. The proxies I will present are bulk-chemical composition, Sr/Nd isotopes, and particle-size distribution of the terrigenous sediment fraction. The derived aridity records from sediment cores off Mauritania have varying temporal resolution throughout the Late Quaternary. In addition, I will attempt to ground-truth the inferences made from the sediment archive with modern data from sediment traps that have collected dust over the past few decades and ongoing. The combination of proxies and modern observations offers the unique opportunity to study in high detail the natural versus anthropogenic dust production and transport, as well as their marine environmental effects.

Do. / Thu. 12 st

Gebäude/Building

GEO

Hörsaal/Lecture hall

H6

Die Vortragsreihe  
ist eine  
interdisziplinäre  
Plattform zur  
Information und  
Diskussion für  
Studierende,  
Forschende und  
Lehrende

Gäste  
sind herzlich  
willkommen

*The lecture series  
serves as an  
inter-disciplinary  
platform for  
students, junior  
and senior  
scientists.*

*Guests  
are cordially  
invited!*

