BSG Fixed-term Working Group
Sand Seas and Dune Fields
Final Report

Overview

The BSG Sand Seas and Dune Fields fixed term working group was established for three years from 2008 until 2010 to co-ordinate the UK input into the digital atlas of sand seas and dune fields being developed by INQUA (http://inquadunesatlas.dri.edu/) and to explore the ways in which data held in the atlas could be used to explore research questions in aeolian geomorphology.

The group met formally on four occasions in 2008, four occasions in 2009 and twice in 2010 before hosting a one-day conference. The group successfully bid to the RGS/IBG for further funding to extend our activities. In particular, this funding supported the international one-day meeting, titled *Global Sand Seas: past, present and future*, held at the RGS/IBG in London in October 2010.

As well as being involved with input into the INQUA digital atlas, which concentrated on developing a database of chronological information, the group produced a digital atlas which provided a wider range of data more useful for geomorphological investigations of sand seas. The intention was to develop a pilot study of an individual sand sea such that the resultant methodology would have international relevance and global applicability, being adaptable to studies in other major sand seas. The Namib Sand Sea was chosen for this pilot and the atlas successfully completed. It is available at http://www.shef.ac.uk/sandsea.

Members

Prof Ian Livingstone (Northampton, working group co-ordinator); Dr Andreas Baas (King's College London); Prof Mark Bateman (Sheffield); Dr Charlie Bristow (Birkbeck London); Dr Rob Bryant (Sheffield); Prof Joanna Bullard (Loughborough); Prof David SG Thomas (Oxford); Dr Kevin White (Reading); Dr Giles FS Wiggs (Oxford).

Outputs

Peer reviewed papers

- Livingstone I, Bristow C, Bryant RG, Bullard J, White K, Giles Wiggs GFS, Baas ACW, Bateman M, Thomas DSG 2010 The Namib Sand Sea digital database of aeolian dunes and key forcing variables, *Aeolian Research* **2** 93-104. DOI:10.1016/j.aeolia.2010.08.001
- Bullard JE, White K, Livingstone I 2011 Morphometric analysis of aeolian bedforms in the Namib Sand Sea using ASTER data, *Earth*

Surface Processes and Landforms **36** 1534–1549.
DOI: 10.1002/esp.2189

Conference contributions

- *Report of the Sand Seas and Dune Fields Working Group* - presentations on Working Group progress at 'Windy Day' meetings at: King's College, London, October 2008; Loughborough University, October 2009
- *The Namib Sand Sea Digital Database of aeolian dunes and key forcing variables* - presented at the 7th International Conference on Aeolian Research (ICAR7), Santa Rosa, Argentina, July 2010, G Wiggs, I Livingstone, C Bristow, R Bryant, J Bullard, K White, A Baas, M Bateman and D Thomas, presented by G Wiggs.
- *Global Sand Seas: past, present, future* – a one day meeting convened by the working group at the RGS/IBG 18th October 2010. Meeting attended by over 50 delegates. Keynote addresses by Profs Nick Lancaster, Paul Hesse and Andrew Goudie. Four presentations by working group members.

Other output

- *Secrets of the Sands*, article by Olivia Edwards, published in *Geographical* 2010 vol **82** no. 10 pp.30-33.

Future plans

Although the fixed term of the working group formally finished at the end of 2010, the group has continued to meet and will continue to bid for funds to extend its work. In particular, completion of the digital atlas has raised a number of research questions about the development of the Namib Sand Sea which the group believes are best tackled using fieldwork for which additional funds are being sought. The group intends to apply to the British Society for Geomorphology to extend the term of the working group to allow us to undertake:

- further dissemination of work already completed through international peer-reviewed papers and conference presentations;
- extension of the approaches and methodology used in creating the Namib Digital Atlas to produce digital atlases of other sand seas;
- field investigation in the Namib Sand Sea to validate remotely-sensed data provided in the atlas and to explore research questions raised by the atlas data about the development of the sand sea.

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