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Table 1: Calcium carbonate content and grain size measures (graphic mean and sorting) of the grab samples taken from the channel off Kunduchi Beach Hotel (Fig. 4).

Table 1.

Sample No.	Carbonate (%)	Mean (phi)	Sorting (phi)
1	4.51	0.684	0.735
2	1.36	0.705	0.717
3	1.71	0.372	0.745
4	7.58	0.494	0.648
5	0.30	0.480	0.633
6	1.10	0.873	0.652
Average	2.76	0.601	0.688

LIST OF FIGURES

Fig. 1. Location of Manyema Creek and its associated tidal delta platform at Kunduchi.

Fig. 2. Components of net sand transport in the creek and delta at Kunduchi; and the 25-year mean monthly wind vectors at 3 p.m. at Dar es Salaam International Airport (Shaghude *et al.*, in review). Average monthly totals of the mean surface wind frequency for wind speeds greater than 5 m/s are shown as percentages. Red arrows = NE monsoon; Blue arrows = SE monsoon.

Fig. 3. Tidal current velocity measured during spring tide cycles at the Manyema channel from 11–13, February 2009.

Fig. 4. Sand sampling sites in Manyema Creek and on the delta platform at Kunduchi. Green spot = current meter site; Red triangles = sand sampling sites (1-6, Table 1).

Fig. 5. Quarried-rock groynes installed around the sand spit south of Kunduchi. Erosion at Kunduchi village and revetment protection at Kunduchi Beach Hotel indicated. Image, 8 November 2005 © 2010 GeoEye.

Fig. 6. Sand bedforms at low water: a) Dunes on creek channel floor, 30 cm scale; view up-creek 10 April, 2008; b) Dunes interfering with current ripples, 30 cm scale; 7 April, 2008, view to NE; c) Dunes on a linear bar wash onto a rippled sand flat; 7 April, 2008, view to N.

Fig. 7. Current ripples on the sand flat north of the creek mouth at low water, 8 April 2008; lee faces (in shade) indicate shoreward sand transport. 30cm scale, view to S.

Fig. 8. Time-series images of the delta platform off Kunduchi Beach Hotel: a) 20 December 2003 ©2010 DigitalGlobe; b) 8 November 2005 ©2010 GeoEye.

FIGURES

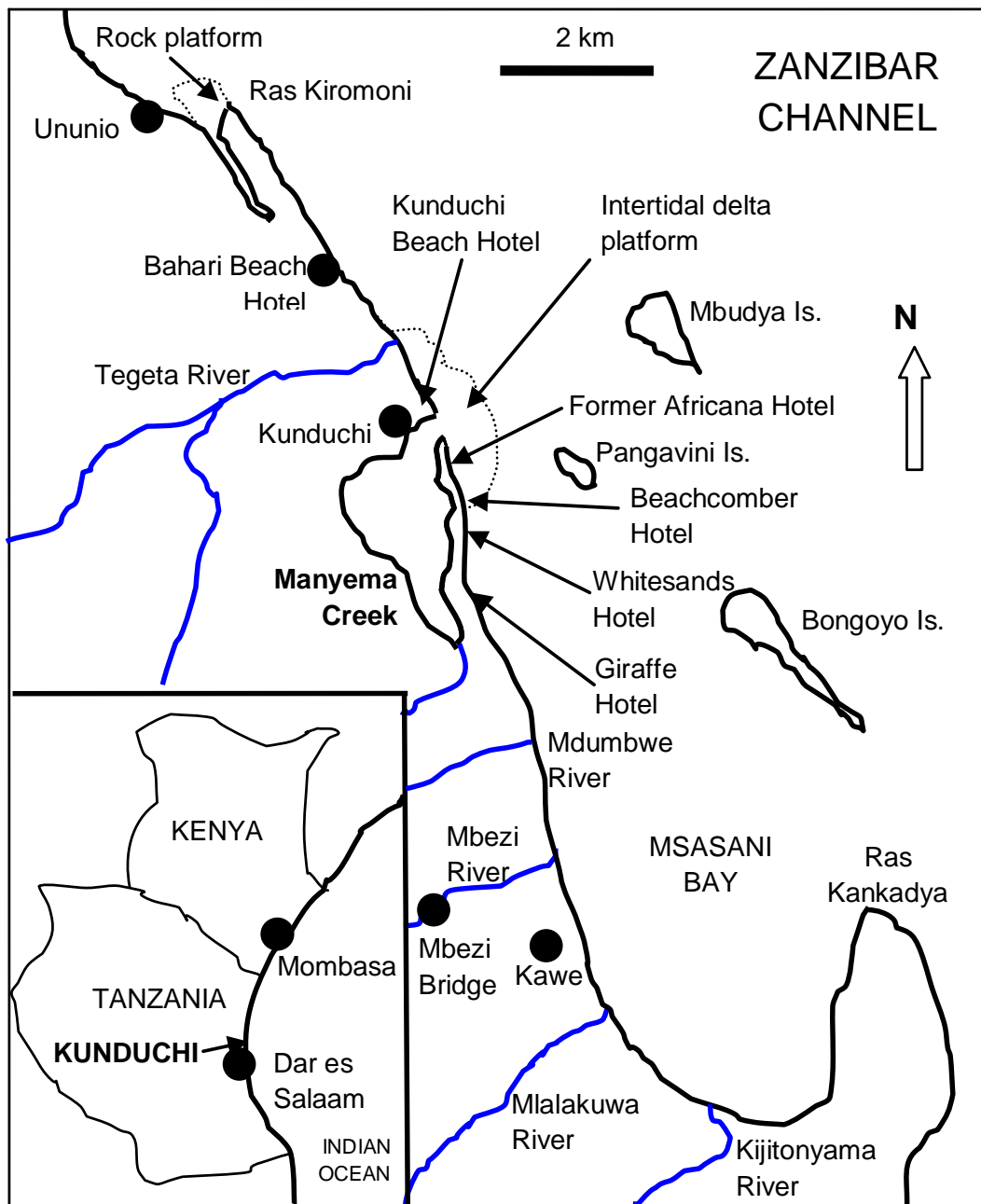


Figure 1

Morphodynamics of the Manyema tidal delta

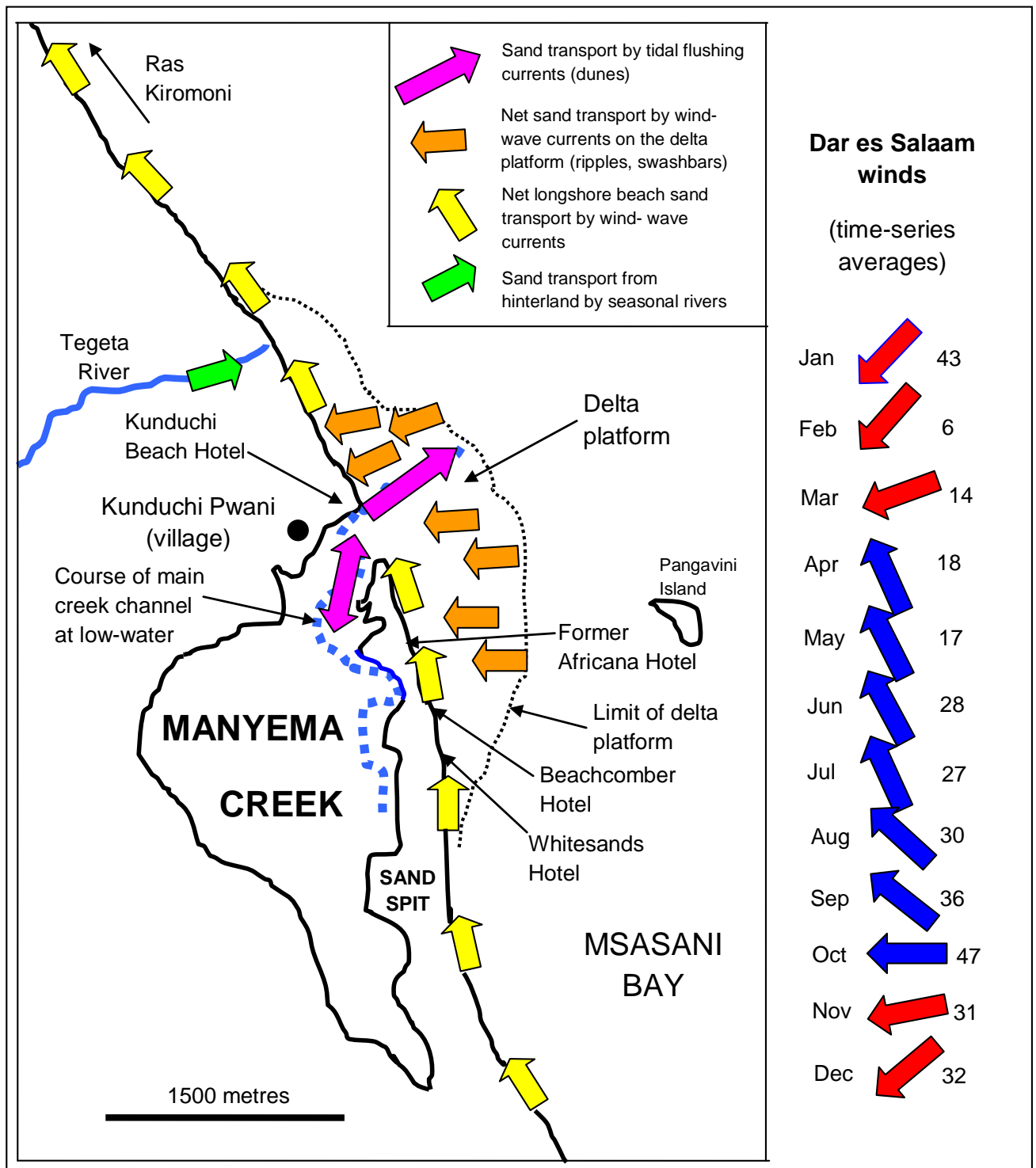


Figure 2

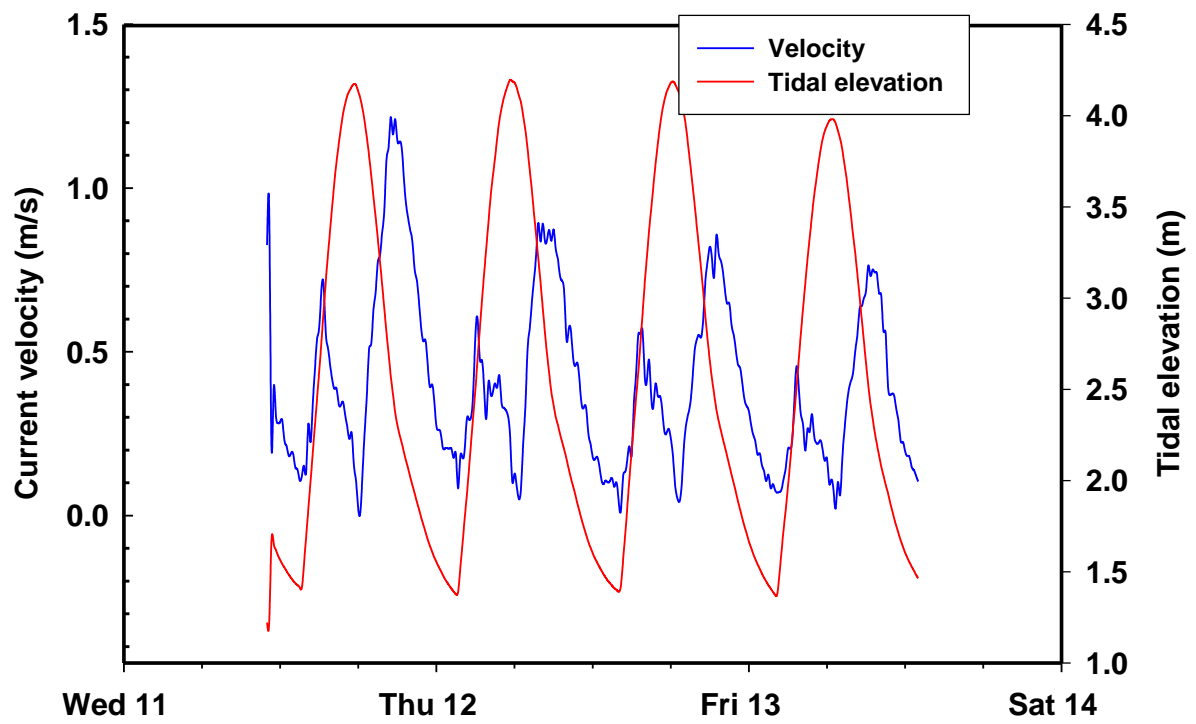


Figure 3

Morphodynamics of the Manyema tidal delta

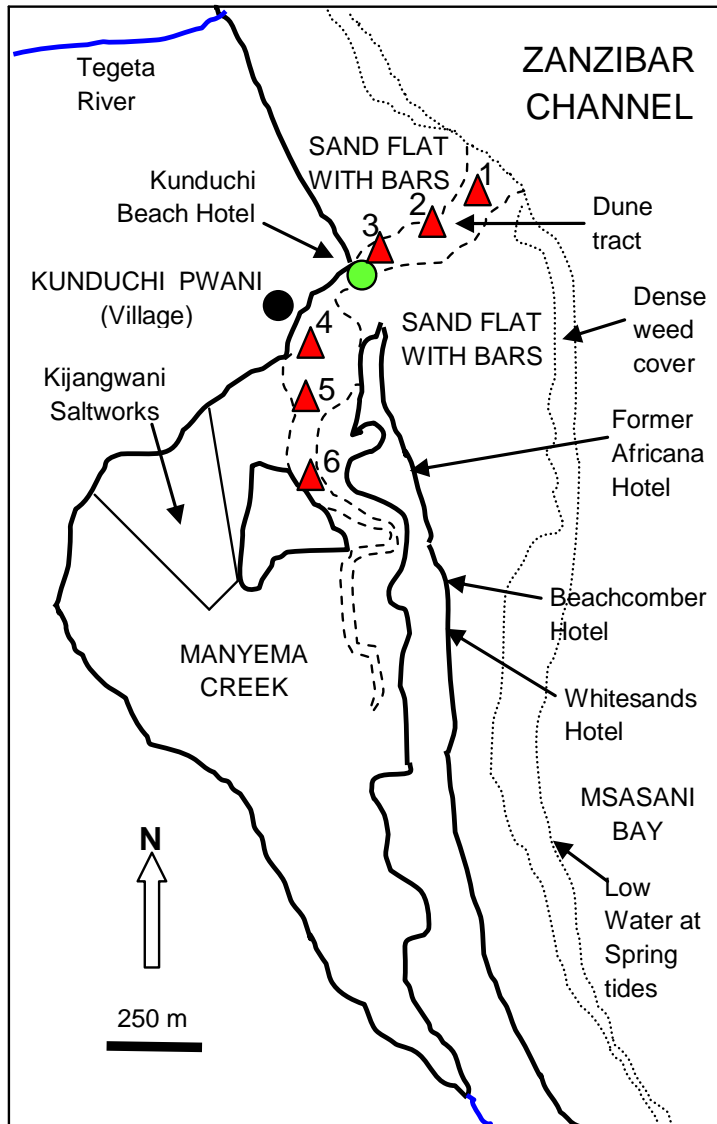


Figure 4

Morphodynamics of the Manyema tidal delta

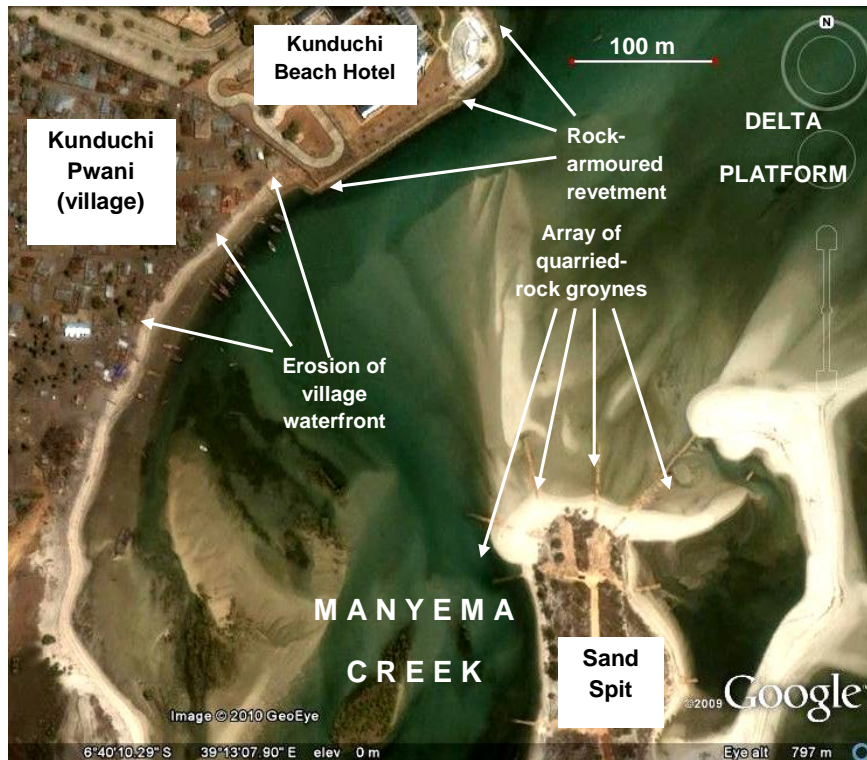


Figure 5

Morphodynamics of the Manyema tidal delta



Figure 6



Figure 7

Morphodynamics of the Manyema tidal delta



Figure 8