



## DISCUSSION

### **Discussion of: Maa, J.P.-Y. and Hobbs, C.H., III, 1998. Physical impact of waves on adjacent coasts resulting from dredging at Sandbridge Shoal, Virginia. *Journal of Coastal Research*, 14(2), 525–536.**

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#### INTRODUCTION

Over the last ten years or so, the preferred option to alleviate beach “erosion” has been direct sand replenishment, but it is becoming more and more difficult to find resources of suitable sand readily available close to the beach. This has progressively lead to the exploitation of offshore seabed material out of simple necessity, but research into the potential consequences of dredging from the offshore seabed, is still within its infancy.

#### SANDBRIDGE SHOAL

However, the excellent paper by Maa and Hobbs stands out as an example of what could be done, and should be done in researching the use of offshore sand deposits, before project implementation. On this count, we consider that this paper represents the cutting-edge of current beach nourishment technology. Nevertheless we are somewhat surprised that one important element of the behaviour of this offshore seabed shoal, has barely been addressed although it may well be discussed in some of the author’s references. We put this in the form of the basic question “why has Nature built the shoal in the first place, and what function is it discharging now?

Then to elaborate a little, we should like to pose these questions:

- (a) Why does the shoal exist? It must be there for some very good reason, Nature never wastes her resources, if they are not needed in any particular place, she won’t accumulate them there.
- (b) Since it does exist, what does the shoal do?
- (c) Is the Sandbridge Shoal stationary, *i.e.* is it stable in volume, or is it mobile? The authors’ Figures 9, 10 and 11, suggest that the littoral sediment transport is highly variable, *i.e.* between 200m/hour to the North in Figure 9 and 100m/hour to the South in Figure 11, yet the seabed contours of Figure 6, give precise contours, all apparently un-affected by littoral drift.
- (d) Is the Sandbridge shoal something that can be treated in isolation within the authors’ rectangular study area (Figure 6) or is it something that is only part of something very much larger within a much more extensive seabed feature? See authors’ Figure 6, for the relevant contours. The study area is only about one quarter of the anomalous contour zone, shown in the authors’ Figure 6.

We hope that the authors might report upon the answers to these queries.