



# **Evolução da Zona Costeira**

Passado – Presente - Futuro

*Rui Taborda*



*Zona costeira - interface terra-mar*





2006



2017

## Sistema dinâmico

Escalas espaciais e temporais – segundos/ horas / anos / milhares de anos / ++  
- cm / m / km / ++



<http://www.micore.eu>

Ocupação -> desafio

.solução?

---

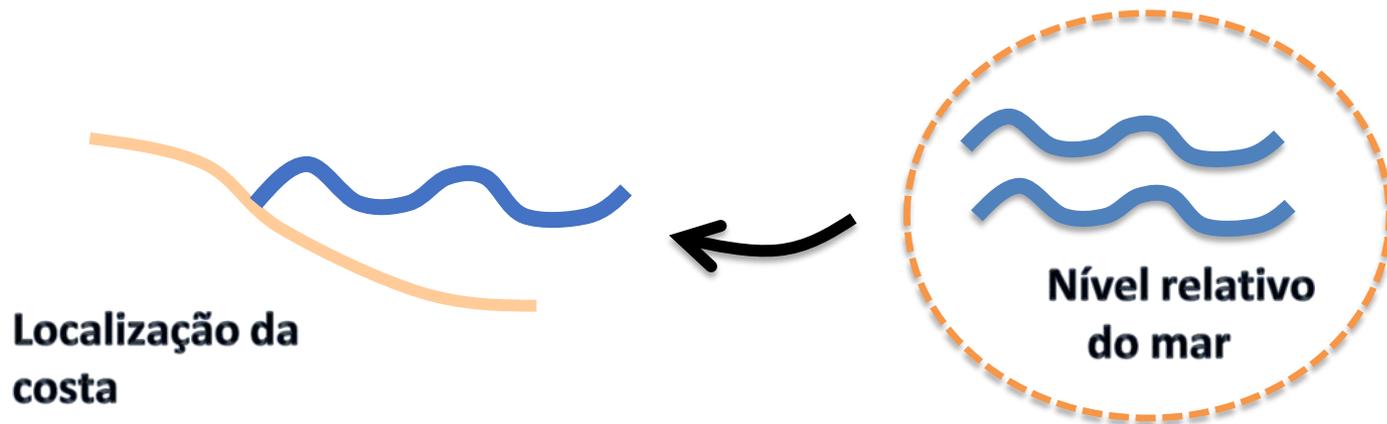
.papel da ciência?

.conhecer o sistema

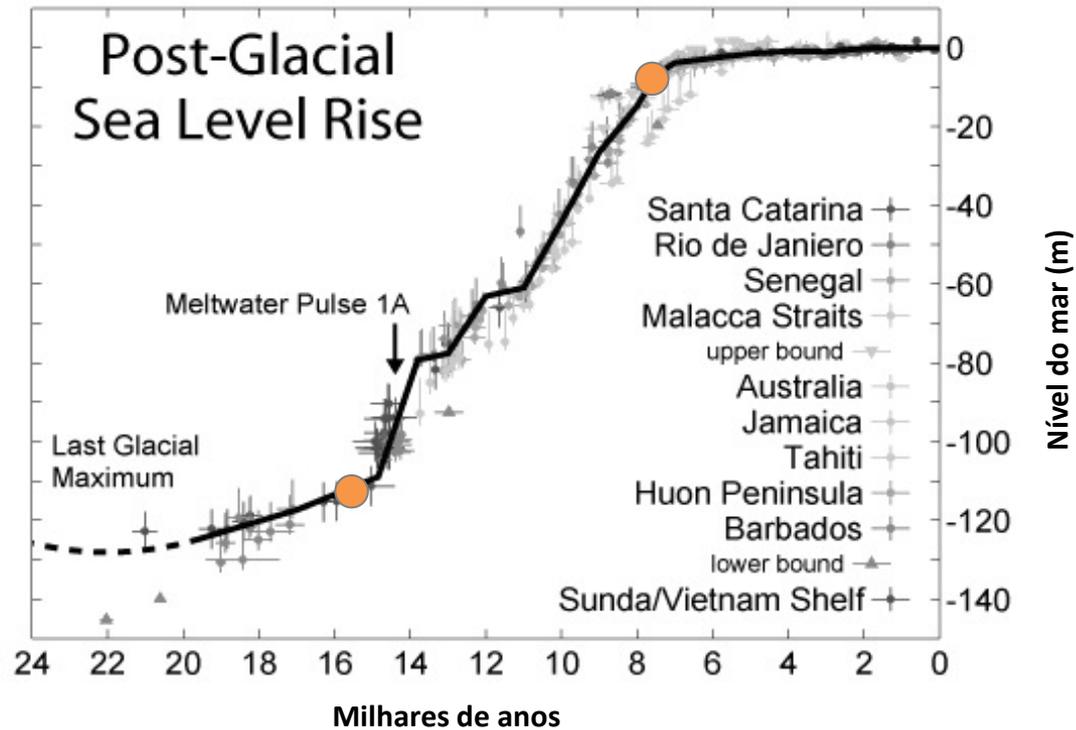
---

.transferir o conhecimento

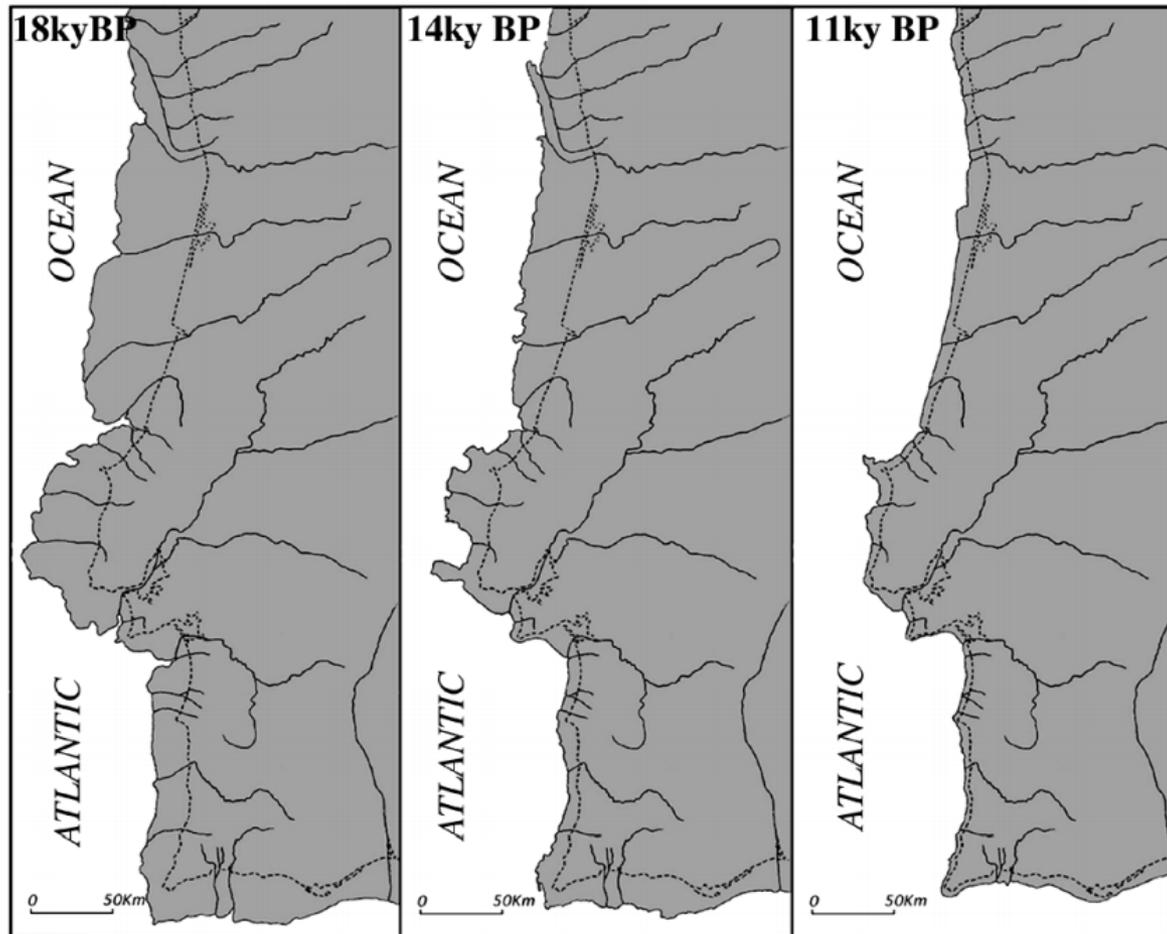
INFORMAR



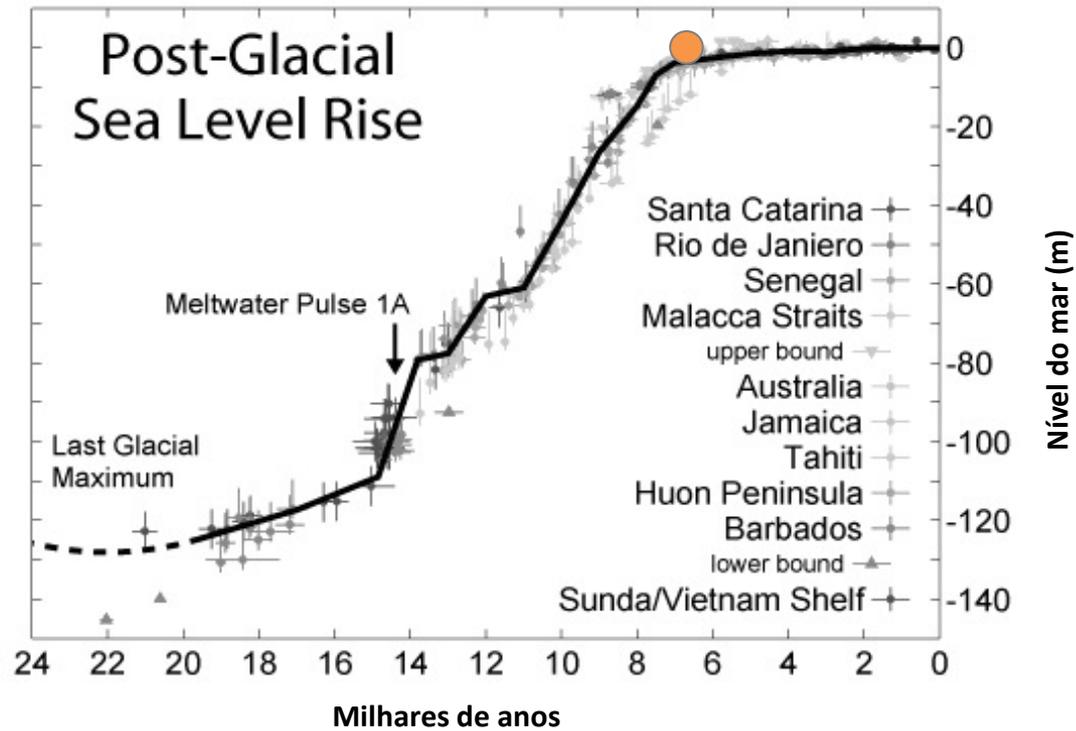
subida do nível médio do mar



subida do nível médio do mar



subida do nível médio do mar



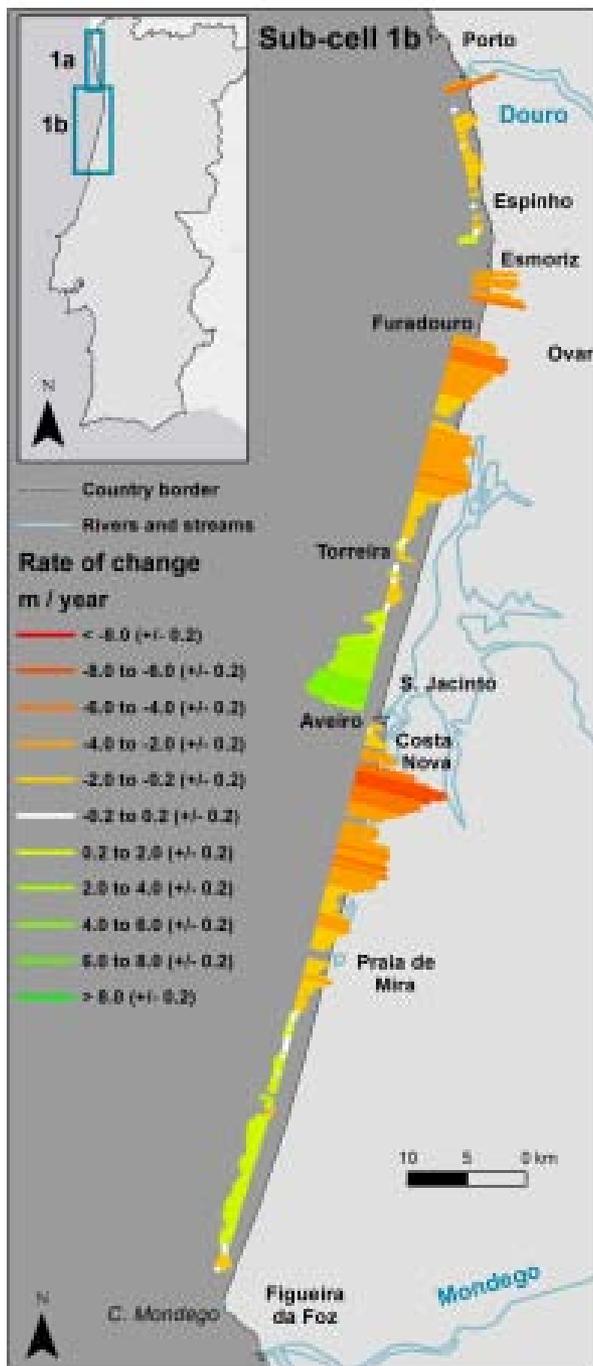
subida do nível médio do mar





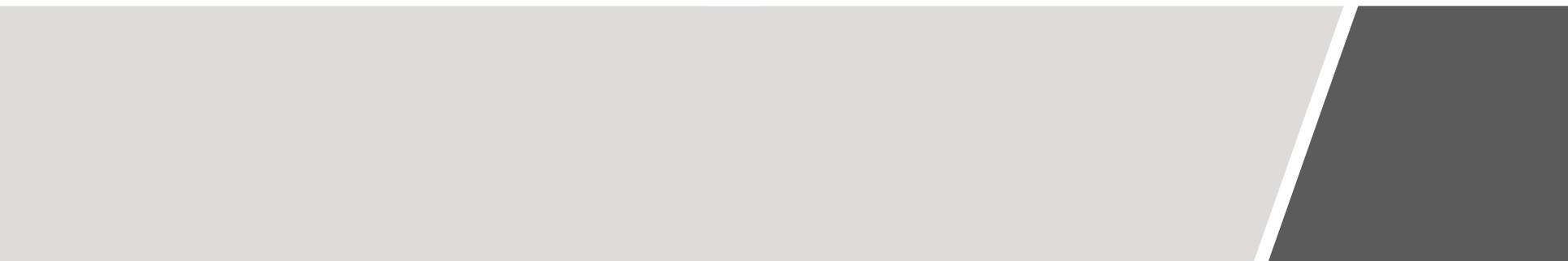
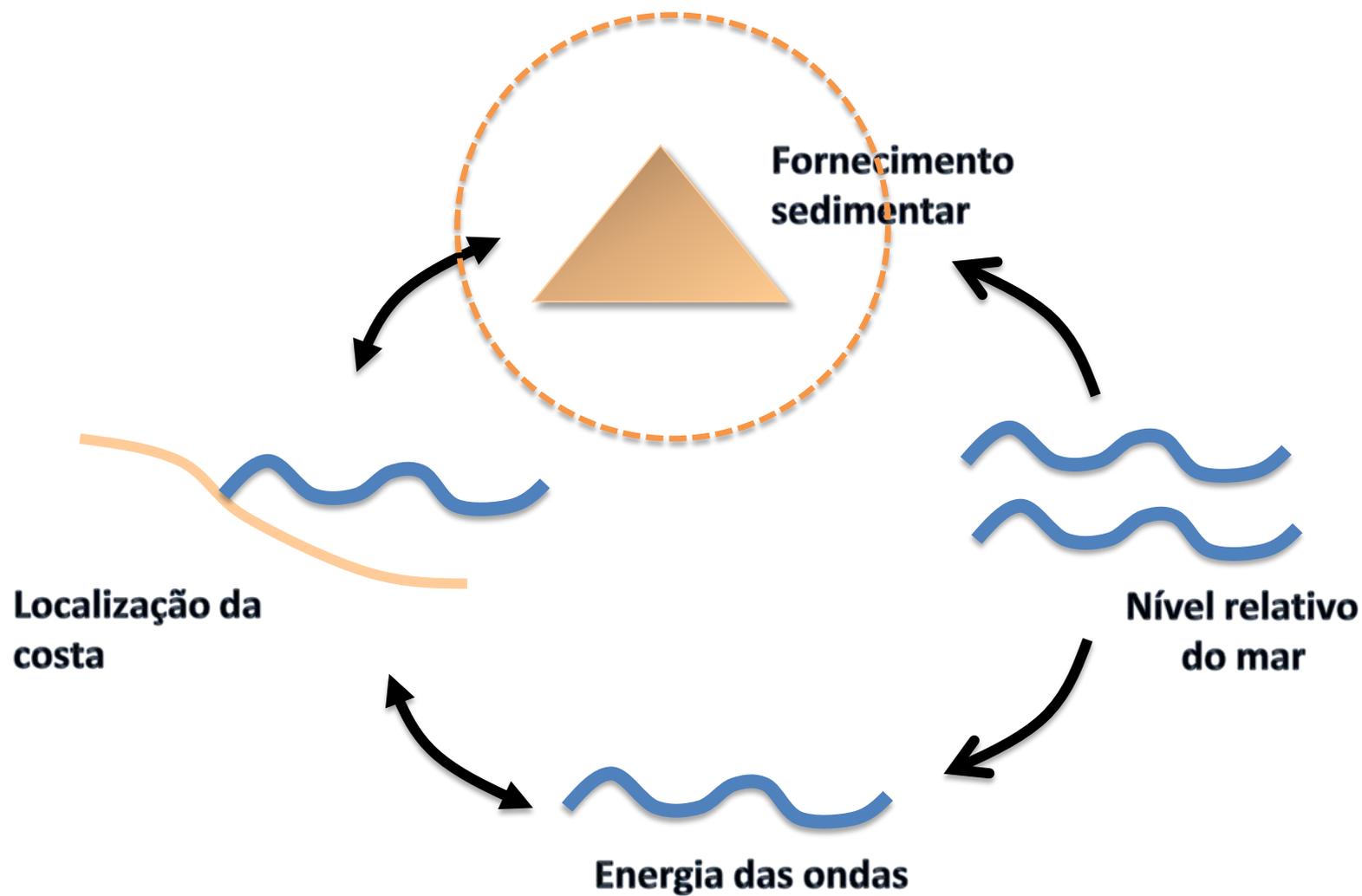
Freitas, Joana Gaspar de, et al. "O Homem e as Zonas Costeiras." (2015)

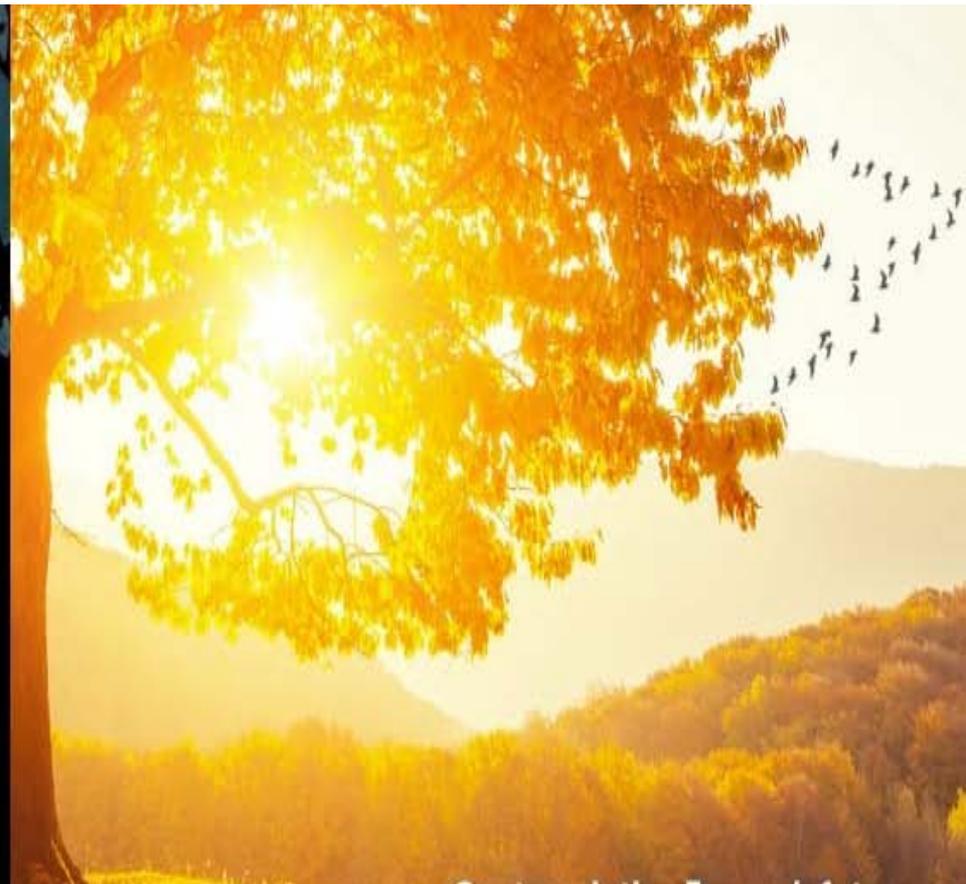
Figura 2: Trabalhos de aterramento dos edifícios destruídos pelo mar (ILUSTRAÇÃO PORTUGUESA, 05-12-1904. Hemeroteca Municipal de Lisboa)



recuo  
0.91 m/ano

Ponte Lira, C., Silva, A. N., Taborda, R., and de Andrade, C. F.: Coastline evolution of Portuguese low-lying sandy coast in the last 50 years: an integrated approach, *Earth System Science Data*, 8(1):265-278. doi:10.5194/essd-8-265-2016, 2016

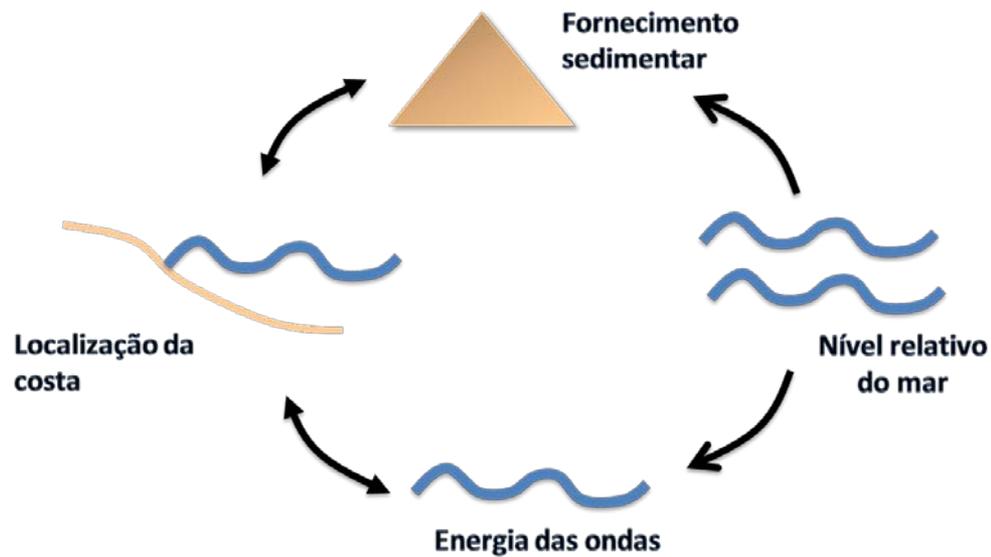




Futuro?

# Intervenção antrópica

## Alterações climáticas





## European Sediment Network

**Next SedNet Conference:  
3-5 April 2019, Dubrovnik, Croatia**



## Regional Sediment Management

US Army Corps of Engineers

**Colleagues,**

The Monmouth University Urban Coast Institute and the Mid-Atlantic Regional Council on the Ocean are hosting a free Webinar on the Beneficial Reuse of Sediment, May 30th 11am - 12pm EDT. The Webinar is free of charge. More detailed information and instructions on how to RSVP for the webinar are below.

I hope you will join us on May 30th.

Tom

# Gestão sedimentar sustentada

# Será suficiente?

 **UNEP Global Environmental Alert Service (GEAS)**  
Taking the pulse of the planet; connecting science with policy  
Website: [www.unep.org/geas](http://www.unep.org/geas) E-mail: [geas@unep.org](mailto:geas@unep.org)

March 2014 Home Subscribe Archive Contact

Thematic focus: Ecosystem management, Environmental governance, Resource efficiency

## Sand, rarer than one thinks

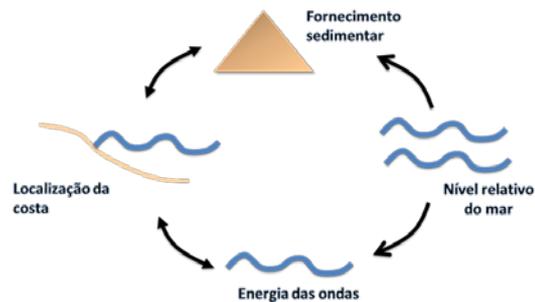
Sand and gravel are mined world-wide and account for the largest volume of solid material extracted globally. Formed by erosive processes over thousands of years (John, 2009), they are now being extracted at a rate far greater than their renewal. Furthermore, the volume being extracted is having a major impact on rivers, deltas and coastal and marine ecosystems (Figure 1), results in loss of land through river or coastal erosion, lowering of the water table and decreases in the amount of sediment supply. Despite the colossal quantities of sand and gravel being used, our increasing dependence on them and the significant impact that their extraction has on the environment, this issue has been mostly ignored by policy makers and remains largely unknown by the general public.



### Why is this issue important?

Intervenção antrópica

Alterações climáticas



# Gestão sedimentar sustentada



O futuro ...





[http://soconnell.web.wesleyan.edu/courses/ees106/lecture\\_notes/coastal%20erosion/HTML%20Presentation%20folder/sld049.htm](http://soconnell.web.wesleyan.edu/courses/ees106/lecture_notes/coastal%20erosion/HTML%20Presentation%20folder/sld049.htm)

...depende das nossas escolhas...



...mas temos de ver todas as perspetivas...



...





<https://www.youtube.com/watch?v=CzrymETf9hY>

...



...escolhas informadas.

