



## **Extreme sea-levels, coastal risks and climate changes: lost in translation**

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Occurring commonly in Brazilian coastal (and continental) areas, floods are probably the most devastating natural hazards our local society faces nowadays. With the expected sea-level rise and tropical storms becoming stronger and more frequent, the scenarios of local impacts of sea-level rise and storm surges; causing loss of lives, environmental damages and socio-economic stress; need to be addressed and properly communicated.

We present results related to the sea-level setups accordingly to IPCC's scenarios and the expected coastal floods in the Paraná State, Southern Brazil. The outcomes are displayed in scientific language accompanied by "translations" with the objective of showing the need of a different language approach to communicate with the players affected by coastal hazards.

To create the "translation" of the "scientific" text we used the Up-Goer Five Text Editor, which allows writing texts using only the ten hundred most used English words. We allowed ourselves to use a maximum of five other words per box not present at this dictionary, not considering geographical names or units in the count, provided there were simple. That was necessary because words as sea, beach, sand, storm, etc., are not among the one thousand present at the Up-Goer, and they are simple enough anyhow. On the other hand, the not scientific public we targeted speaks Portuguese, not English, and we do not have an Up-Goer tool for that language. Anyhow, each Box was also produced in Portuguese, as much simple as possible, to disseminate our results to the local community.

To illustrate the need of "translation", it is worthy to mention a real case of a troublesome misunderstanding caused by us, scientists, in our coastal society. Some years ago, one of our colleagues at the university, a much-respected scientist, informed through a press release that, on a given day, "we will experience the highest astronomical tide of the century". That statement (scientifically true and accurate) caused some panic in the coastal communities, which consulted us, at the coastal research campus, if they were supposed to take all their belongings and move up to the hills. This tide was only few centimeters higher than the usual.

Thus, the translation we mentioned is not just the need of putting in plain words our scientific results when communicating outside the academy, nor just a need of not being "cryptic". It goes far away from obvious: we have to be formally trained, also, to explain science other than in a scientific language.

We hope this chapter will alert, also, to the need of training the youth scientists in the use of appropriate languages and the need of being socially sympathetic in doing so, not only publishing relevant outcomes in the academic world, in spite of the PoP environment. In particular, this work was the result of a class and fieldwork with a group of graduate students of Oceanography and Geology, who we hope will develop their careers with this extra skill. This work was possible thanks to partial support of IOI-SWAO and the Lloyds' Register Foundation.