

COASTAPPLI: A CITIZEN SCIENCE SMARTPHONE APPLICATION TO MONITOR AND BETTER UNDERSTAND COASTAL HAZARDS OF EROSION AND MARINE FLOODING

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CoastAppli is a citizen science smartphone application aiming to monitor and better understand coastal hazards (erosion and marine flooding), ultimately to support coastal management. Co-funded by EUR ISblue (the interdisciplinary graduate school for the blue planet), Sea-Eu and Interreg AGE0 projects, CoastAppli is intended for all users, whether or not they have experience in coastal monitoring. Within the framework of the OSIRISC observatory of coastal risks in Brittany, standardized and simple field protocols for measuring hazards, applicable for all types of coasts (dune, beach, cliff), were co-designed with coastal managers (measurement of water levels, distance between reference markers and the coastline). CoastAppli makes these protocols available in the format of a smartphone application in order to: 1) facilitate reliable, simple and rapid measurements in the field with common tools (measurements with fingers, own body size, measuring tape, laser distance meter, qualitative survey with photographs), 2) involve a large public in coastal hazard monitoring. The collected data will contribute to a better knowledge of the evolution of erosion and marine flooding hazards, in order to address the related coastal management challenges and raise awareness on coastal dynamics among the general public. CoastAppli is currently being tested for 6 months in the municipality of Guissény (Brittany, France) by grade school students, coastal managers and citizens in order to: i) quantify the reliability of the measurements; ii) assess whether the application meets the expectations of the coastal managers by saving time for data collection in the field; iii) collect feedback on the degree of vulgarisation for the general public; iv) explore if citizen engagement is maintained over the medium term (several years). The current phase of testing is essential to validate the application before a future deployment that is intended in Brittany, then in France and beyond.

**Commenté [P1]:** En vert, ceux dont j'ai reçu l'accord pour les mettre en coauteurs.