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IS 'COASTALITY' ABLE TO CATCH THE WAVE OF CHANGE ALONG COASTAL ABIOTIC ENVIRONMENT, AT LOCAL LEVEL?

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The space where land and sea interacts each other is complex and dynamically altering. To describe those areas is a difficult and rather vague scientific goal. Moreover, in order to catch the 'Wave of Change' along the coastal areas is obligatory to monitor continuously the occurring changes.

The quality of monitoring depends on using methodologies and tools, indices included. It is noticeable that AGENDA 21 (paragraph 17.8) promotes the developing of indices to improve "capacity to collect, analyse, assess and use information for sustainable use of resources, including environmental impacts of activities affecting the coastal and marine areas".

To achieve this target new indices have been proposed, in the context of AMICA project. They are based on the spatial notion and they provide a perspective to assess the total anthropogenic impact on an examined coastal area. [Kiousopoulos, Journal of Coastal Conservation, v.12/1, 2008, Springer]. The present paper is trying to clarify one among them, 'Coastality'. In addition it will answer the title question: Is Coastality able to assess sufficiently the rapid changes on coastal abiotic space? In other words, can Coastality enrich the offered and already in use indices that are dedicated to survey the existing situation and the human impact on a coastal abiotic environment, at local level?

Coastality aims: to calculate how much the land affected by its proximity to the sea, to assess the magnitude of coastal characteristics of a coastal area, to measure "how coastal a coastal area is". This new indicator combines the natural-abiotic features and the man-made impact on the coastal space. In this way, Coastality is divided into Natural and Artificial Coastality. At a second level of approach, Coastality is illustrated by a variety of smart and representative sub-indicators, to provide a reliable value for this new indicator. In addition, coefficients have been used so as to succeed in a balanced impact on the final Coastality formula.

Even if Coastality is not yet totally defined, it is considered to have a remarkable capability to catch the 'Wave of Change' along the coastal space. Indeed, beyond the functionality of absolute Coastality values and the answer to the central issue of this paper, the most valuable outcome of the new indicator development will be derived from the differences of Coastality' values, at the same coast at two different periods of time and at different coasts at the same time. The scale of those differences seems to be very significant to pre-estimate the quality of the abiotic environment of any coastal area with relatively small size.

Coastality does not annul the existed coastal indices. It will act additionally, with the further aim to improve the spatial planning procedure and to support the local authorities and all the involved stakeholders, towards the effective implementation of an ICAM procedure. The associated future research includes the potential incorporation of biotic coastal environment and the assessment of Coastality effectiveness: a) in larger areas and b) in lakes and rivers banks.

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