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Opinion

The Integrated Coastal Areas and River Basin Management in Calabria (Southern Italy)

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Coastal regions and fluvial catchments, transiction areas between terrestrial, marine and riverine ecosystems, are characterized by a great diversity of biological, social and economic domains strictly connected in the same territory [1-5]. So, it is necessary to apply in European countries the principle of "water continuum" able to melt coastal and continental zones in the same landscape unit [6-11]. In this way, United Nations (ONU) issued in 1992 a new kind of coastal management known as Integrated Coastal Area and River Basin Management (hereafter, ICARM) [12] (Figure 1).

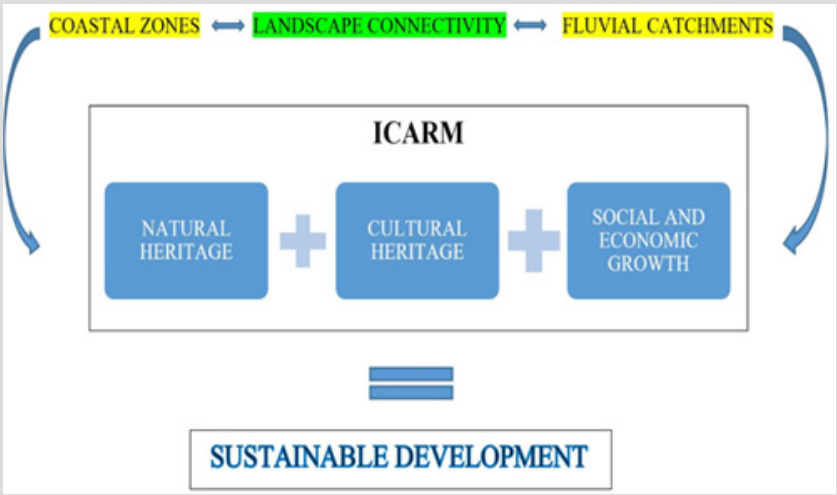

Figure 1: ICARM pattern for the sustainable development of coastal regions.

Since from nineties, just few studies regarded, river basins as the landward sides of coastal zones [13-16, 5]. As a matter of fact, this global and holistic approach remains, until now, a simple dream not only in Europe but also in Italian regions. In this critical pattern, it is shown a local case study in the coastal region of Belmonte Calabro (Calabria, Southern Italy), testing the great potential of ICARM process in a wilderness area characterized by great environmental values. The first results of this research highlight the total lack of any integrated coastal management program within a region where coastal and continental areas could become a joint environmental system. In this coastal area, the fluvial catchment of Verri's stream could represent an important ecological corridor connecting two Zones of Special Conservation (ZSC), one marine the other terrestrial, within Natura 2000 Network, both melt in the same landscape unit [17] (Figure 2).

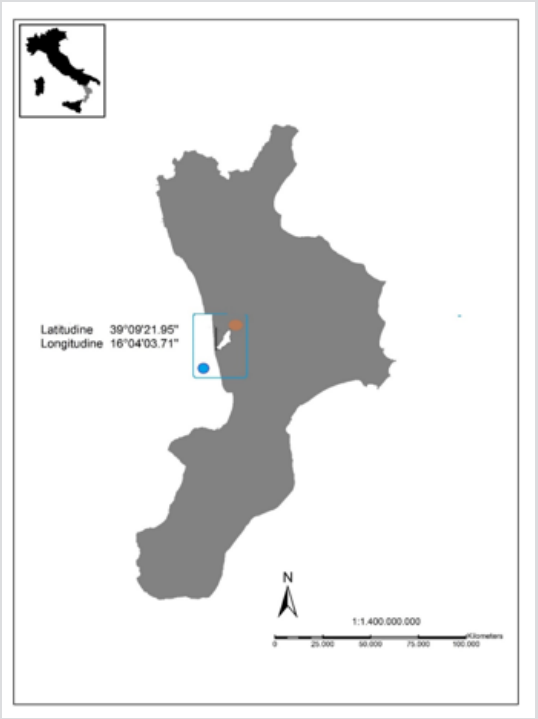

Figure 2: Study area and geographic coordinates of Verri's stream connecting terrestrial and marine ZSC, respectively marked with red and blue dots.

Calabria region, characterized by a coastline of 715 Kilometres and by a widespread net of 1005 riverine catchments [18] could represent the ideal landscape pattern to realize ICARM process. According to this new kind of landscape framework, coastal and continental areas could be connected by ecological and fluvial corridors, as the vessel plot of a human circulatory system (Figure 3).

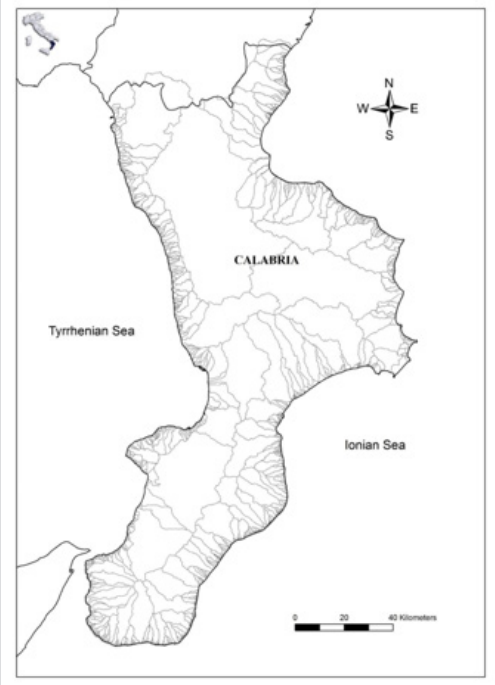

Figure 3: Hydrographic network of Calabria region.

From these first results, Calabria regional economy appears strictly connected with its natural and cultural heritage but an effective integrated coastal management remains, until now, totally unrealized. In conclusion, ICARM process could represent the main tool to realize a real and effective development of coastal regions able to connect marine, littoral and riverine systems in the same landscape planning.

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