

# Effect of Sea Level Rise (SLR): Global Warming and, cadastral and population conformation of the Colombian Caribbean.

Ivan Dario Camacho Puerto, Ana María Estupiñán Muñoz and Johan Andrés Avendaño Arias (Colombia)

**Key words:** Cadastre; Coastal Zone Management; Marine cadastre; Risk management; Appraisals; Sea Level Rise (SLR); Global Warming; Cadaster Multipurpose; Population; Colombian Caribbean.

## SUMMARY

The Institute of Geography Agustín Codazzi (IGAC), contemplating the National Development Plan "Colombia, World Power of Life" (2022-2026) and the Sustainable Development Goals (SDGs), seeks to analyze the territorial consequences (physical-economic) in the urban-coastal area due to the progressive Rise in Sea Level (RSL). Generated by global warming and its probable effects on human resettlement in coastal areas, from the resilience dynamics of communities. As a result of the RSL, 40 municipalities of the Caribbean coast will suffer the impacts of both: marine transgression and accelerated coastal erosion. Cartagena and Santa Marta are already suffering impacts (flooding and disappearance of beaches). This increases the vulnerability and effects on housing, real estate investments or tourism sector and the affectation of conservation areas, in addition to exacerbating the problem of land tenure and living costs. The most vulnerable area of the Caribbean coast is concentrated in the north of La Guajira, and in the south, in the municipalities of Antioquia. However, the municipalities with the greatest area affected or densely populated were chosen, showing particularities regarding the different types of affectations. In the urban area, there is a high impact due to flooding, erosion and contamination. This, in some way, continues to be generated as well as projects on the coast, such as the construction of hotels and infrastructure to prevent the loss of the beach. Even so, over the years, urban areas will be destined to adapt their habitat forms or be displaced to higher ground and inland. This work represents the possible replication of the Multipurpose Cadastre data management to understand the spatial dynamics that the nation will face, being the knowledge of the territory, the updating and maintenance of the cadastral base, the pillars to face global warming and improve the resilience capacity of the Colombian Caribbean.

---

Effect of Sea Level Rise (SLR): Global Warming and, cadastral and population conformation of the Colombian Caribbean. (12546)

Ivan Dario Camacho Puerto, Ana María Estupiñán Muñoz and Johan Andrés Avendaño Arias (Colombia)

FIG Working Week 2024

Your World, Our World: Resilient Environment and Sustainable Resource Management for all  
Accra, Ghana, 19–24 May 2024