The Coastal Zone and its multiple uses

Strategic Social and Environmental Conflicts importance

The strategic importance of the Brazilian coastal zone can be demonstrated in many ways, is the mosaic of ecosystems that is home to enormous biodiversity or the divergent conflicting economic interests associated with disorderly urban sprawl. It is in this complex system that focuses 23.58% of the population (Source: IBGE, 2010). the coastal area has particularly sensitive areas and fragile from an environmental point of view, such as estuaries and mangroves. However, in general the entire coastline is subject to development vectors in a clear process of expansion, among which include tourism, aquaculture, implementation of wind farms, large industrial, port and logistics structures, connected mainly , offshore oil exploration, and its multiplier effects, such as those produced by the discovery and exploration of pre-salt formation. Such activities, which has also contributed to accelerate the irregular urban sprawl, with all the problems and impacts arising from it, such as the dumping of sewage and coastal and continental industrial effluents and the occupation of public areas and permanent preservation in an environment marked by various landscape systems. not only in the coastal interface are located the sources of incidents problems in the region, there are direct and indirect connections established with both the marine environment and the continental part of the territory. somehow, any activity developed in the marine environment has reflection in the occupation of coastal and continental areas. For the oil industry, for example, bases are necessary ground support both to transport their products as to the distribution of inputs (equipment, materials, fuel, provisions, among others) to the operating units. Moreover, it requires a complex logistics structure with a large hotel chain and bases to support the maritime, land and air. In the case of industrial fishing is essential to the existence of warehouses for fish landing and structures for the processing of the same, and the entire network to the logistics of distribution of products involving different modes of transportation. In turn, the various concentrated economic activities in the continental part of the territory, and depend directly and indirectly affect the coastal and marine environments. As an example, it cites is tourism, which generates a seasonal flow of people and capital to the coastal regions in the high season, causing significant impacts on the distribution of water and electricity, effluent disposal and waste collection. Other examples are food, textile, steel, and others who have, in most cases, resource extraction and production activities located in inland continental regions, but depend directly on road and port facilities for the marketing of products and acquisition inputs. They use water bodies as recipients of its effluents, depending on the catchment area in which they are installed, can jeopardize, limit or even prevent other uses downstream, as water abstraction for public supply, agriculture, fishing and activities leisure. in addition, certain land uses such as agriculture and the installation of industrial centers significantly contribute to contamination of water resources and, consequently, the adjacent marine environment, generating economic and social losses. Diffuse and point sources of pollution are responsible for the accumulation and increase of harmful substances to human and environmental health. In the case of intensive agriculture, besides the reduction of riparian forests and the consequent exposure of the soil to the elements, there is significant load carrying of nutrients to water bodies. This charge can promote eutrophication and permanent contamination of rivers, lakes, estuaries and seas causing environmental and social impacts relevant. The point sources of discharge of industrial effluents are responsible for raising the concentration of toxic substances such as heavy metals and oil products , among others. Even when the disposal of these substances is carried out in compliance with the standards established by law in drainage basins with high occupancy can occur the synergistic effect of some elements, promoting an increase in their concentration and making the quality of the water unfit for its intended uses . A difficult effect to measure, but highly impactful is the bioaccumulation of some toxic elements, which can cause contamination of the entire food chain of an environment, even the levels that do not have direct contact with the substance. It is the case of fish used for human consumption, which throughout its life can accumulate high concentrations of mercury, lead and zinc, for example, due to the ingestion of contaminated bodies. The final destination of most substances disposed in watercourses water along the river basin is the marine environment. This has high clearance capacity especially in places with high hydrodynamics, where the constant exchange of water promotes rapid dispersion and dilution of

pollutants. But what has been observed in several regions of the country and the world is that this debugging capability seems to have reached its limit, undermining the balance of ecosystems, due to the large intake of contaminants from various sources, both inland and coastal and marine . Add to this the supply of solid waste, in particular plastics, which slowly decomposes in natural environment and are not diluted. These materials have various shapes and sizes and can easily be confused with food for many animals. They can, therefore, hinder activities such as fishing, shipping and tourism. This complex scenario demonstrates the need for management, planning and management of these different activities and uses identified in the Coastal Zone.