

## **MULTI-DIMENSIONAL INTEGRATED APPROACH TO COASTAL ENVIRONMENT MANAGEMENT IN MASAN BAY OF KOREA**

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Most semi-closed bays in Korea became targets of the land-based activities such as industrial complexes construction, city development, and coastal reclamation. Not strange any more in those bays have been anoxia in water column, red-tides, habitat loss, decrease of fish stocks etc. since 1980s. The Korean government designated five coastal areas as Special Management Areas (SMA) for addressing the issues.

The Masan bay among them has been emerged as nation-wide interest area since the first red-tide occurred in Korea in the late 1970s. The bay is the Korean prototype showing how development-oriented policy for economic growth has sacrificed marine environment, people and various values dependent on it, and potential for our future. Special emphasis on the bay drove environmental investment of a total of USD 6.5 billion during last two decades. All efforts failed to achieve policy goal of “swimmable and fishable”, though. Major management issues regarding the failure were identified as weak integrated management mechanism, insufficient issue-oriented data, top-down biased approach, weak management capacity, and lack of conflict resolution mechanism.

A strategic management plan to address the management issues was formulated in 2004 through deliberative process by Local Forum (non-legal binding) comprising national agencies, local governments, industrial sectors, navy, academia, and local NGOs. Facilitators and research team provided all available data to support the deliberative process.

This approach to the establishment of the strategic plan was unique and as well unparalleled in Korea. The Forum contributed to realization of multi-dimensional integrated approach to coastal environment management of the bay afterward. In 2005, integrated decision-making mechanism was formulated; Masan Bay Management Council (MBMC) and Community-based Advisory Council (CAC) are legal-binding bodies. To address data and information issues, Scientific Advisory Council (SAC) was organized, comprising scientists recommended from national agencies, local governments and NGOs. Policy recommendations by SAC are transferred to CAC. Only reviewed and fully agreed suggestions by CAC could go to the desk for final decision-making of MBMC.

The first agenda tackled by this decision-making process was to establish an action plan to control land-based pollutants and activities. A total pollutant loads management plan came out in 2007 through three-year’s researches and the integrated decision-making process. Consequently, about half of planned development projects on the watershed of

the bay were cut off for improving water quality and enhancing environmental carrying capacity.

Masan Bay and its people have seen the multi-dimensional integrated approach worked successfully in tackling long-lasting issues: science and policy integration, vertical integration (bottom-up and top-down), horizontal integration (related national agencies and laws), and spatial integration (land-based activities and marine environment). We expect that this case could be applied to other SMAs and resolving coastal use conflicts of Korea.

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