

LONG-RANGE PLANNING OF COASTAL REGIONS FOR
GLOBAL WARMING IMPACTS: AN EXAMPLE IN JAPAN

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Being located on the Pacific Rim in Monsoon Asia, Japan is subject to virtually every kind of natural hazard. Its coastal cities and regions are particularly vulnerable to these disasters. In this paper, the vulnerability of cities on the coast of Osaka Bay to global warming impacts, especially possible sea level rise, as well as other disasters is presented, and medium and long-range planning concepts for the entire Bay Area, including all of its cities, are proposed.

The method used here is the one developed by McHarg and known as "ecological planning". First, an ecological resource inventory of the entire Bay Area (the regional context for coastal urban planning) is developed. Next, based on the information in this data base, several criteria for regional and city planning are developed. These include, vulnerability to hazards, such as earthquakes, floods (including sea level rise), landslides, fires etc.; health criteria, such as airsheds (vulnerability to air pollution), aquifer recharge etc.; and amenity (ex. scenic and cultural values) etc. These are used to undertake land and water use suitability evaluations that are the bases to the region's medium and long-range future planning assuming some 100cm and 200cm of sea level rise, respectively.

Key Words: sea level rise; ecological planning; Osaka Bay Area