

Social Resilience of Communities Around Industrial Areas in Facing Environmental Changes and Preserving Ecosystems in Gresik Regency, Indonesia

Septi Ariadi*, Muhammad Saud, and Siti Masudah

Faculty of Social and Political Sciences, Airlangga University, Surabaya 60286, Indonesia

ABSTRACT

The development of the Java Integrated Industrial Port Estate (JIPE) in Gresik Regency, East Java, Indonesia, has created a dilemma for the surrounding communities. On one hand, it promotes regional development and stimulates the local economy through job creation and economic multiplier effects. On the other hand, the industrial area has caused social changes and environmental problems. These issues include air pollution, river and groundwater contamination, ecosystem and marine life damage, changes in occupation and income of the local population, coastal sedimentation, erosion, weak environmental management, climate change, and extreme temperatures. The degree of social resilience in facing these environmental changes, marine ecosystem shifts, temperature variations, and climate change remains suboptimal. This study aims to analyze the social resilience of communities in facing the environmental and climate change impacts, as well as their efforts in environmental and marine ecosystem management. Conducted in Gresik Regency, the study focuses on two sub-districts, Manyar and Bungah, covering nine villages. Data collection was carried out using mixed methods, combining survey techniques and in-depth interviews with government officials, community leaders, NGOs, CBOs, youth and women's groups, industrial representatives, and vulnerable groups. The data were analyzed to explain the level of social resilience in responding to environmental changes and the strategies for environmental and marine ecosystem management. The study found that the community's adaptive capacity to environmental changes remains suboptimal due to economic, social, and cultural conditions. The transformation of the area from fishponds to an industrial center has led to changes in the ecosystem and the work rhythm and occupation of the local population. Efforts to maintain environmental balance can be achieved through the provision of air quality monitoring and water purification facilities, flood prevention, greening of the area, sustainable housing and eco-friendly lifestyles, the use of renewable energy sources, socialization of coastal and marine ecosystem maintenance and management, and the development of environmentally friendly behaviors. Collective and participative activities need to be developed to enhance adaptive capacity to environmental and climate changes, ensuring that industrial growth aligns with environmental sustainability and community welfare. Pentahelix collaboration (academia, industry, community, government, media) should be continuously developed to maintain environmental sustainability based on the principle "industry yes, environmental damage no".

Keywords: Social resilience/ Environment/ Industrial area/ Marine ecosystem