

INTISARI

Kawasan pesisir Indonesia, termasuk Semarang, kaya akan sumber daya tetapi rentan terhadap bencana yang mempengaruhi kebutuhan air domestik. Intrusi air laut dan pencemaran mengancam kualitas air bersih, mendorong masyarakat untuk mengadopsi strategi adaptasi. Pengelolaan sumber daya air dan infrastruktur yang efektif sangat penting untuk memastikan akses air bersih dan mendukung upaya adaptasi terhadap perubahan lingkungan. Penelitian ini bertujuan untuk (1) menganalisis kualitas air yang digunakan oleh masyarakat di daerah yang terkena banjir pasang surut, (2) mengkaji bagaimana masyarakat pesisir beradaptasi untuk memenuhi kebutuhan air domestik mereka sebagai respons terhadap banjir pasang surut, dan (3) mengidentifikasi peran *stakeholder* dalam mendukung upaya adaptasi masyarakat pesisir untuk memenuhi kebutuhan air domestik mereka di Desa Tambak Lorok dan Desa Kemijen, Kota Semarang.

Metodologi yang digunakan menggabungkan teknik kuantitatif dan kualitatif, meliputi pengukuran sampel air tanah dan pelaksanaan wawancara semi-terstruktur. Sebanyak 114 rumah tangga berpartisipasi, bersama dengan *stakeholder* utama termasuk Dinas Kelautan dan Perikanan Jawa Tengah, Dinas Perumahan dan Permukiman Kota Semarang, Badan Pengelola Daerah Aliran Sungai Pemali Juana (BBWS), PDAM Tirta Moedal, Yayasan Bintari, Pengusaha Sumur Artesis, Organisasi Masyarakat Tambak Lorok (KUB), Komunitas Kemijen (KOMJEN), dan Departemen Perencanaan Regional dan Kota di Fakultas Teknik, Universitas Diponegoro.

Hasil penelitian menunjukkan bahwa kualitas air tanah di Kampung Tambak Lorok dan Kemijen tergolong rendah untuk memenuhi kebutuhan domestik. Dari tujuh sampel sumur artesis yang diuji, dua di antaranya tergolong payau, sementara lainnya berada dalam kategori transisi antara air tawar dan payau. Kondisi ini mencerminkan adanya intrusi air laut yang diperparah oleh penurunan muka tanah akibat eksploitasi air tanah dan banjir rob yang terus terjadi. Dalam pengelolaan air domestik, teridentifikasi sembilan *stakeholder* yang berperan, dengan PDAM Tirta Moedal dan Dinas Perumahan dan Kawasan Permukiman sebagai aktor kunci. *Stakeholder* lain seperti pengusaha sumur artesis, BBWS Pemali Juana, Bintari *Foundation*, dan organisasi lokal turut memberikan kontribusi dalam konteks teknis maupun sosial. Namun, koordinasi lintas-*stakeholder* belum optimal, dan akses layanan air perpipaan masih belum merata. Masyarakat mengembangkan strategi adaptasi campuran dengan menggunakan air galon untuk konsumsi, sumur artesis untuk keperluan rumah tangga, serta sebagian memanfaatkan PDAM sebagai sumber tambahan. Strategi ini mencerminkan respons aktif terhadap keterbatasan struktural yang ada. Penelitian ini menegaskan bahwa adaptasi masyarakat tidak berdiri sendiri, melainkan sangat dipengaruhi oleh kualitas lingkungan fisik dan efektivitas tata kelola air yang melibatkan banyak pihak. Kolaborasi yang lebih kuat antar-*stakeholder* sangat diperlukan untuk menjamin keberlanjutan pemenuhan air bersih di wilayah pesisir yang terdampak banjir rob.

Kata kunci: banjir rob, kualitas air, adaptasi masyarakat, *stakeholder*

ABSTRACT

Indonesia's coastal areas, including Semarang, are rich in resources but vulnerable to disasters that affect domestic water demand. Seawater intrusion and pollution threaten clean water quality, prompting communities to adopt adaptation strategies. Effective management of water resources and infrastructure is essential to ensure access to clean water and support adaptation efforts to environmental change. This study aims to (1) analyse the quality of water used by communities in areas affected by tidal floods, (2) examine the adaptation of coastal communities in meeting domestic water needs due to the impact of tidal floods, and (3) identify the role of stakeholders involved in supporting the adaptation of coastal communities to meet domestic water needs due to the impact of tidal floods in Tambak Lorok Village and Kemijen Village, Semarang City.

The method used was quantitative-qualitative with groundwater sample measurements and semi-structured interviews with 114 households as well as several relevant stakeholders, namely the Central Java Marine and Fisheries Agency, Semarang City Housing and Settlement Area Agency, Pemali Juana River Basin Agency (BBWS), PDAM Tirta Moedal, Bintari Foundation, Artesian Well Entrepreneurs, Tambak Lorok Joint Business Group (KUB), Kemijen Community (KOMJEN), and Department of Urban and Regional Planning, Faculty of Engineering, Diponegoro University.

The results showed that groundwater quality in Tambak Lorok and Kemijen villages is low enough to meet domestic needs. Of the seven artesian well samples tested, two were classified as brackish, while the others were in the transition category between fresh and brackish water. This reflects seawater intrusion, which is exacerbated by land subsidence due to groundwater exploitation and ongoing tidal flooding. In domestic water management, nine stakeholders were identified, with PDAM Tirta Moedal and the Housing and Settlement Area Office as key actors. Other stakeholders such as artesian well operators, BBWS Pemali Juana, Bintari Foundation, and local organizations also contribute in both technical and social contexts. However, cross-stakeholder coordination has not been optimal, and access to piped water services is still uneven. The community developed a mixed adaptation strategy by using gallon water for consumption, artesian wells for household use, and some utilized PDAM as an additional source. These strategies reflect an active response to existing structural limitations. This research confirms that community adaptation is not independent, but is strongly influenced by the quality of the physical environment and the effectiveness of water governance that involves many parties. Stronger collaboration between stakeholders is needed to ensure the sustainability of clean water supply in coastal areas affected by tidal floods.

Keywords: tidal flooding, water quality, community adaptation, stakeholders