

***STUDY OF RIPARIAN AREA ENVIRONMENTAL DAMAGE  
AS AN RIVER ENVIRONMENTAL CONSERVATION  
(Case Study in Riparian Area of the Upper Pepe and Kali Anyar Rivers in  
Surakarta City)***

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**ABSTRACT**

*The limitation of urban land has triggered the community to use the river border area. The utilization of the location on the river border will cause environmental damage to the local river protection area if no river border management was carried out. The purpose of this study is (1) to examine the type of damage in terms of abiotic, biotic and cultural components in the environment of the adjacent green space of the Upper Pepe and Anyar Kali Surakarta City; (2) determine the level of environmental damage between the Open Space and Upper Anyar Kali of Surakarta City; (3) develop strategies and policies for environmental management to overcome and maintain the Green Open Space for Upper Pepe and Anyar Times in Surakarta City.*

*The research method used was the survey and secondary data support. Field interviews and surveys were conducted to obtain primary data. This study used is an environmental approach that contains environmental components that include abiotic, biotic and cultural aspects. Sampling was done by stratified random sampling. The total environmental damage assessment for riverfront RTH uses the scoring method.*

*The results showed that the types of environmental damage of green open space between Upper Pepe and Kali Anyar times from abiotic components included the use of borders for built up land, cliff erosion and the phenomenon of flood events. The type of environmental damage from the biotic component was the reduction in the area of open space boundaries, while the type of environmental damage from the biotic aspect is the violation of the rules for the use of river boundaries, the formation of slums and poor environmental sanitation. The results of the assessment of the level of environmental damage of Open Space and Upper Pepe River and Kali Anyar were dominated by areas with a low damage class of 42.58 ha, moderate damage area of 4.37 ha, high damage class of 3.31 ha and very high damage class of 8, 82 ha. High class damage was found in Jebres Village of 1.03 ha while the class of damage was very high spread in Gilingan Village at 3.55 ha, Banyuanyar Village at 1.44 ha and Nusukan Village at 1.25 ha. The strategy for environmental management of green open space for upstream Pepe and Kali Anyar times was based on four classes of environmental damage levels, which were arranged in the form of a management matrix consisting of non-technical aspects, structuring settlements on riparian areas. Management of the technical aspects, namely the control of illegal buildings and the construction of green open spaces. Determination of river border management policy was prohibition on all forms of aquaculture activities in border areas and embankments that were not used according to their designation.*

**Keywords:** *Riparian Area, Environmental Deterioration, Environmental Management Strategy*

**KAJIAN KERUSAKAN LINGKUNGAN SEMPADAN SUNGAI  
UNTUK PELESTARIAN LINGKUNGAN SUNGAI  
(Kasus di Sempadan Kali Pepe Hulu dan Kali Anyar Kota Surakarta)**

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**INTISARI**

Keterbatasan lahan perkotaan memicu masyarakat untuk memanfaatkan lahan sempadan sungai. Pemanfaatan lokasi di sempadan sungai akan menimbulkan kerusakan lingkungan pada kawasan perlindungan sungai setempat apabila tidak dilakukan pengelolaan sempadan sungai. Tujuan penelitian ini yaitu (1) mengkaji jenis kerusakan ditinjau dari komponen abiotik, biotik dan kultural pada lingkungan RTH Sempadan Kali Pepe Hulu dan Kali Anyar Kota Surakarta; (2) menentukan tingkat kerusakan lingkungan RTH Sempadan Kali Pepe Hulu dan Kali Anyar Kota Surakarta; (3) menyusun strategi dan kebijakan pengelolaan lingkungan untuk mengatasi dan mempertahankan RTH Sempadan Kali Pepe Hulu dan Kali Anyar Kota Surakarta.

Metode penelitian yang digunakan yaitu survei dan dukungan data sekunder. Wawancara dan survei lapangan dilakukan untuk memperoleh data primer. Penelitian ini menggunakan pendekatan lingkungan yang memuat komponen lingkungan yang mencakup aspek abiotik, biotik dan kultural. Pengambilan sampel dilakukan dengan cara *stratified random sampling*. Penilaian kerusakan lingkungan total RTH sempadan sungai menggunakan metode skoring.

Hasil penelitian menunjukkan bahwa jenis kerusakan lingkungan RTH Sempadan Kali Pepe Hulu dan Kali Anyar dari komponen abiotik antara lain pemanfaatan sempadan untuk lahan terbangun, erosi tebing dan fenomena kejadian banjir. Jenis kerusakan lingkungan dari komponen biotik yaitu berkurangnya luas RTH sempadan sungai sedangkan jenis kerusakan lingkungan dari aspek biotik yaitu pelanggaran aturan pemanfaatan lahan sempadan sungai, terbentuknya lingkungan kumuh dan buruknya sanitasi lingkungan. Hasil penilaian tingkat kerusakan lingkungan RTH Sempadan Kali Pepe Hulu dan Kali Anyar didominasi oleh luasan dengan kelas kerusakan rendah sebesar 42,58 ha, kelas kerusakan sedang seluas 4,37 ha, kelas kerusakan tinggi seluas 3,31 ha dan kelas kerusakan sangat tinggi seluas 8,82 ha. Kerusakan kelas tinggi terdapat di Kalurahan Jebres sebesar 1,03 ha sedangkan kelas kerusakan sangat tinggi tersebar di Kalurahan Gilingan sebesar 3,55 ha, Kalurahan Banyuanyar sebesar 1,44 ha dan Kalurahan Nusukan sebesar 1,25 ha. Strategi pengelolaan lingkungan RTH Sempadan Kali Pepe Hulu dan Kali Anyar yaitu didasarkan atas empat kelas tingkat kerusakan lingkungan, yang disusun dalam bentuk matriks pengelolaan yang terdiri dari aspek non teknis yaitu penataan permukiman di lahan sempadan sungai. Pengelolaan dari aspek teknis yaitu penertiban bangunan liar dan pembangunan RTH sempadan sungai. Penetapan kebijakan pengelolaan sempadan sungai yaitu pelarangan terhadap segala bentuk aktivitas budidaya pada sempadan sungai dan juga tanggul yang bukan dimanfaatkan sesuai peruntukannya.

**Kata kunci:** RTH sempadan sungai, kerusakan lingkungan, strategi pengelolaan lingkungan