

## INTISARI

### Analisis Pengaruh Dimensi Pembangunan Berkelanjutan terhadap Kualitas Lingkungan Hidup Daerah Istimewa Yogyakarta dengan Pendekatan Spasio-Temporal

Sulistiwawan Fajar Nugroho

NIM 20/458625/GE/09308

Pembangunan berkelanjutan mencapai keberhasilan apabila terjadi peningkatan kualitas lingkungan hidup. Keseimbangan antardimensi pembangunan berkelanjutan dalam pelaksanaan implementasi menjadi penentu tercapainya hal tersebut. Provinsi Daerah Istimewa Yogyakarta merupakan provinsi dengan tingkatan pembangunan yang tinggi, tetapi memiliki kualitas lingkungan yang buruk. Oleh karena itu, pembangunan harus memperhatikan aspek keberlanjutan yang seimbang antardimensi sehingga peningkatan kualitas lingkungan hidup tercapai. Penelitian bertujuan mengetahui pola spasio-temporal dimensi pembangunan berkelanjutan, tipologi spasio-temporal kualitas lingkungan hidup, serta pengaruh dimensi pembangunan berkelanjutan terhadap kualitas lingkungan hidup di Provinsi Daerah Istimewa Yogyakarta.

Penelitian menggunakan data sekunder unit analisis penelitian berupa kabupaten/kota Provinsi Daerah Istimewa Yogyakarta dalam periode 2016 hingga 2022. Variabel yang digunakan, meliputi variabel bebas, berupa dimensi sosial, ekonomi, lingkungan, dan hukum dan tata kelola, serta variabel terikat berupa kualitas lingkungan hidup. Selain itu, penelitian juga menggunakan variabel *regional dummy* dan *year dummy* dalam analisis. Analisis pola spasial dilakukan melalui analisis autokorelasi spasial menggunakan Indeks Moran dan *Local Indicator of Spatial Association*. Kemudian, analisis tipologi dilakukan menggunakan tipologi kelas dengan pendekatan variabel anggaran lingkungan hidup dan PSTK (Persentase Struktur Tenaga Kerja) pertanian. Adapun analisis regresi data panel dilakukan mengetahui pengaruh dimensi pembangunan berkelanjutan terhadap kualitas lingkungan hidup.

Hasil penelitian menunjukkan bahwa (1) pola spasio-temporal keempat dimensi pembangunan berkelanjutan pada kelima kabupaten/kota periode 2016-2022 terjadi pola spasial negatif serta pola hubungan spasial didominasi oleh pola autokorelasi *High-Low* dan *Low-High*. (2) Tipologi spasio-temporal kualitas lingkungan melalui pendekatan anggaran lingkungan hidup menunjukkan Kulon Progo dan Gunungkidul terklasifikasi tipologi Kuadran II serta ketiga kabupaten/kota lainnya terklasifikasi sebagai tipologi Kuadran III dan IV. Adapun tipologi melalui pendekatan PSTK pertanian menunjukkan Kulon Progo dan Gunungkidul terklasifikasi Kuadran I, sedangkan ketiga kabupaten/kota lainnya termasuk tipologi Kuadran IV. (3) Melalui analisis regresi data panel menggunakan model *fixed effect* menunjukkan nilai probabilitas 0,000003 sehingga dimensi pembangunan berkelanjutan secara simultan memberikan pengaruh yang signifikan terhadap kualitas lingkungan hidup.

Kata kunci: Dimensi Pembangunan Berkelanjutan, Kualitas Lingkungan Hidup, Regresi Data Panel

## **ABSTRACT**

### **Analysis of Influence Sustainable Development Dimensions on the Environment Quality in The Special Region of Yogyakarta Using Spatio-Temporal Approach**

**Sulistiawan Fajar Nugroho**

**NIM 20/458625/GE/09308**

Sustainable development achieves success if there is an improvement in the quality of the environment. The balance between dimensions of sustainable development in implementation becomes the determination to accomplish this. The Special Region of Yogyakarta is a province with a high level of development but a low level of environmental quality. Therefore, development must pay attention to aspects of sustainability that are balanced between dimensions to achieve environmental quality improvement. The research aims to determine the spatio-temporal pattern of sustainable development dimensions, the spatio-temporal typology of environmental quality, and the influence of sustainable development dimensions on environmental quality in the Special Region of Yogyakarta.

The research used secondary data from the research analysis unit of regency/city from the Special Region of Yogyakarta from 2016 until 2022. The variables used include independent variables, such as social, economic, environmental, also legal and governance dimensions, and the dependent variable was environmental quality. Besides that, the research also used regional and year dummy variables in the analysis. Spatio-temporal pattern analysis was conducted using spatial autocorrelation analysis through the Moran Index and Local Indicator of Spatial Association. Then, a spatio-temporal typology analysis was performed by Klassen Typology using an environmental budget variable and an agricultural PSTK (Percentage of Labor Structure) approach. Also, panel data regression analysis was conducted to determine the influence of sustainable development dimensions on environmental quality.

The research results show that (1) the spatio-temporal pattern of four dimensions of sustainable development in the five regency/city for 2016-2022 has a negative spatial pattern, and autocorrelation patterns of High-Low and Low-High dominate the spatial relationship pattern. (2) The spatio-temporal typology of environmental quality using the environmental budget approach shows that Kulon Progo Regency and Gunungkidul Regency are classified in the Quadrant II typology, and the other three regencies/cities are classified as Quadrant III and IV typology. The typology using the agricultural PSTK approach shows that Kulon Progo Regency and Gunungkidul Regency are classified as Quadrant I, and the other three regency/city are classified as Quadrant IV. (3) Panel data regression analysis using a fixed effect model shows a probability value of 0,000003 so that the dimensions of sustainable development simultaneously have a significant influence on environmental quality.

**Keywords:** Dimensions of Sustainable Development, Environmental Quality, Panel Data Regression