Stakeholder Analysis – Air Pollution Data Analysis Project

The air pollution project involves multiple technologies (Python, SQL Server, Power BI), several data sources, and different audiences who benefit from the analysis.
Understanding stakeholders helps clarify responsibilities, expectations, and project impact.

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1. Stakeholder Identification

Primary Stakeholders

Stakeholder	Role in Project	Interest
Project Team (Data Analysts / Students)	Perform data cleaning, build SQL queries, create Power BI dashboard, document insights.	High – project grade, learning outcomes, accuracy, and quality.
Instructor / Supervisor	Evaluates project results and gives feedback.	High – requires correctness, completeness, and professionalism.
Dataset Providers (Global air pollution data sources, WHO)	Provide the raw pollution and mortality data.	Medium – correct representation of their data.

Secondary Stakeholders

Stakeholder	Role	Interest
Environmental Researchers	Use project insights to compare global air quality.	Medium – want accurate trends and correlations.
Public Health Analysts	Compare pollution's impact on health and mortality.	Medium – require clean, trustworthy results.
Policy Makers / Government Agencies	Use conclusions to support awareness or future planning.	Low to Medium – high-level insights.
General Public	Learns which regions are most affected.	Low – general awareness.

2. Stakeholder Influence vs. Interest Matrix

Power–Interest Grid

Quadrant	Stakeholders	Management Strategy
High Power – High Interest	- Instructor - Project Team	Manage closely
High Power – Low Interest	- Dataset providers (e.g., WHO)	Keep satisfied
Low Power – High Interest	- Environmental researchers - Public health analysts	Keep informed
Low Power – Low Interest	- General public	Monitor only

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3. Stakeholder Needs & Expectations

Instructor / Supervisor

- Clear methodology
- Cleaned, accurate dataset
- Professional documentation
- Correct SQL and Power BI results

Project Team

- Smooth collaboration
- Accurate tools (Python, SQL, Power BI)
- A well-functioning final dashboard
- Strong analysis to earn high marks

Researchers & Analysts

- Trustworthy PM2.5 metrics
- Clear correlation between pollution and health
- Ability to filter by region/country

General Public

- Easy-to-understand visualizations
- Highlighted key insights

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4. Impact of the Project on Stakeholders

Positive Impacts

- Provides global awareness of air pollution trends.
- Helps public health analysts understand which regions face the highest mortality.
- Helps the instructor easily assess student work through a clear dashboard.
- Provides team members with practical experience in Python, SQL, and Power BI.

Potential Negative/Neutral Impacts

- Data providers may be affected if misinterpretation of data occurs.
- Public users might misunderstand insights if visuals are unclear.