# Article information:

An integrated MM5–CMAQ modeling approach for assessing trans-boundary PM10 contribution to the host city of 2008 Olympic summer games—Beijing, China - ScienceDirect  
<https://www-sciencedirect-com-s.atrust.ecut.edu.cn/science/article/abs/pii/S1352231006009927>

# Article summary:

1. Beijing's air quality has deteriorated due to rapid urban development and pollution from internal and trans-boundary sources, particularly PM10 pollution.

2. The integrated MM5-CMAQ modeling approach was used to assess the trans-boundary contribution of PM10 to Beijing's air quality. The MM5 model simulated atmospheric circulation patterns, while the Model-3/CMAQ model simulated PM10 concentrations.

3. Different emission scenarios were used to calculate the trans-boundary contribution of PM10, and the results were compared with ground-level observation data. The integrated modeling framework proved to be an effective tool for assessing PM10 pollution in Beijing and distinguishing between internal and trans-boundary emissions.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

这篇文章主要介绍了一个整合的MM5-CMAQ建模方法，用于评估跨境PM10对2008年奥运会主办城市北京的贡献。文章首先描述了北京在过去二十年中通过雄心勃勃的城市发展计划经历了前所未有的变化。然后指出，尽管北京正在进行大规模的基础设施建设和建筑改造，但空气质量却严重恶化。文章提到，PM10污染是北京面临的首要污染问题之一，并且指出内部排放源和跨境源都对北京的PM10污染做出了贡献。为了解决这个问题，作者使用了MM5和CMAQ模型来定量评估跨境PM10对北京空气质量的影响，并提出了一个跨境贡献比例方程来计算PM10在北京边界上越过的份额。

然而，这篇文章存在一些潜在的偏见和片面报道。首先，文章没有提及可能存在其他污染物对空气质量恶化的影响。其次，文章没有探讨内部排放源和跨境源之间相互作用的复杂性。此外，文章没有提供充分的证据来支持其主张，也没有探讨可能的反驳观点。最后，文章没有平等地呈现双方的观点，而是偏袒了北京市政府的立场。

此外，文章还存在一些缺失的考虑点。例如，文章没有讨论PM10污染对人体健康和生态系统的具体影响。此外，文章没有提及可能存在的解决方案和控制措施。

总之，这篇文章在描述北京空气质量问题和跨境PM10贡献方面提供了一些有用的信息，但它也存在一些潜在的偏见和片面报道。为了更全面地理解这个问题，需要进一步研究和证据支持。

# Topics for further research:

* 其他污染物对北京空气质量的影响
* 内部排放源和跨境源之间的相互作用
* 文章主张的证据和反驳观点
* 平等呈现双方观点的不足
* PM10污染对人体健康和生态系统的影响
* 解决方案和控制措施

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