Planning for Biosolids in Florida:

A Procedural Justice Discourse and Framing Analysis of Rural Community Participation

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Introduction

Biosolids, a byproduct of wastewater treatment, are commonly applied to rural agricultural land as fertilizer. This redistribution of urban waste raises concerns about health, environmental impacts, and fairness, often framed as an environmental justice issue. Using discourse analysis, this study examines how biosolids are framed in Florida planning processes and whether rural concerns are marginalized within technical water quality discussions. The analysis draws on procedural and recognition justice frameworks to assess both participation and representation.

Analytical Framework

Distributive Justice: How environmental benefits and burdens are distributed across urban and rural regions

Procedural Justice: Fair and inclusive decision-making processes

Recognition Justice: Whether rural concerns and experiences are acknowledged

Methodology

Method: Qualitative discourse analysis of how biosolids are framed in Florida planning processes

Data Sources: ~ 30 hrs. of public meetings
- Regional Biosolids Symposium
- FDEP Technical Advisory Committee (TAC) meetings

Coding: Open coding identified how participants defined problems, risks, stakeholders, and solutions. Codes were then grouped into broader categories (e.g., water quality, agriculture, regulation, community impacts).

Analysis: Categories were used to reconstruct dominant policy frames and compare issue priorites across forums. Results were interpreted using environmental justice and planning frameworks.

Results

Scientific & Technical
"...seems like it's emotional more than any science."

Regulated & Manageable Risk
"Every wastewater facility permit will specify what the facility is allowed to do…"

Public Health & Environmental Risk
"The question is, is that formula going to protect our water quality? Which is not."

Beneficial Resource & Economic Considerations
"There is a beneficial use of biosolids… the fertilizer aspect."

Technological Solutions & Innovation
"There's urgency to figure out what technology is out there that can make things better."

Data Uncertainty & Knowledge Gaps
"We don't know what kind of impact that they are having on organisms in the environment."

Institutional Capacity & Administrative Burden
"They are limited by budgets."

Regional Equity & Rural Communities
"...we believe that all waters throughout the state of Florida deserve those same protections."

Community Voice & Representation
"…to not have local government representation… is missing a really important voice."

References

Conclusion & Recommendations

Biosolids governance in Florida is largely framed as a technical and economic issue, emphasizing regulation, water quality, and emerging contaminants. Less attention is given to rural recognition, participation, and equity, which can obscure how risks and benefits are unevenly distributed.

An environmental justice lens shows that planning discourse shapes governance outcomes. When rural communities are framed primarily as agricultural sites rather than stakeholders, distributive inequities and limited procedural inclusion may persist.

Key actors, including state agencies, agricultural organizations, environmental advocates, and local stakeholders, play an important role in shaping these narratives.

Recommendation: More inclusive engagement (e.g., targeted outreach, accessible forums, and incorporation of local knowledge) could strengthen recognition, participation, and equity alongside technical goals.

Takeaway: Biosolids policy is not only a technical issue, but also a governance and environmental justice issue. More balanced discourse that centers community voices is essential for fair and sustainable decision-making.

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