



DECENTRALIZED TRANSITION MANAGEMENT UNDER TRUMP 2.0: LESSONS FROM E-JEEPNEYS AND ZERO-WASTE PATHWAYS IN THE PHILIPPINES

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ABSTRACT

Sustainability transitions in the Global South are increasingly shaped by a volatile international political landscape, exemplified by the anticipated rollback of climate commitments under a potential Trump 2.0 administration. This paper investigates how decentralized governance can foster resilience in local transition pathways through a comparative case analysis of two Philippine initiatives: the nationally initiated e-jeepney program in General Santos City and the community-driven zero-waste transition in Batangas City. Anchored in the Multi-Level Perspective (MLP) and Transition Management Theory (TMT), the study reveals how each transition evolved through distinct configurations of actor engagement, governance style, and institutional adaptation. Drawing from these insights, the paper proposes a Decentralized Adaptive Transition Management (DATM) framework, a hybrid governance model emphasizing reflexive learning, nested transition arenas, and local innovation incubation. The DATM framework offers a strategic approach for sustaining transitions amid weak or hostile national environments, highlighting the capacity of local actors to transform uncertainty into opportunity. By advancing a grounded yet transferable model, this work contributes to the global discourse on sustainability governance in politically fragmented contexts.

KEYWORDS: Sustainability transitions, transition management, decentralized governance, e-jeepney, zero-waste, Philippines, Trump 2.0, Multi-Level Perspective, adaptive systems

1. SUMMARY

Sustainability transitions in the Philippine context are neither monolithic nor purely technocratic endeavors. Through a comparative analysis of the e-jeepney program in General Santos City and the zero-waste initiative in Batangas City, this paper explores how sustainability unfolds through diverse pathways, one initiated from the top-down and the other rooted in bottom-up community engagement. Anchored in the Multi-Level Perspective (MLP) and Transition Management Theory (TMT), these cases illuminate the significance of context, actor configurations, and governance styles (Geels & Schot, 2007; Loorbach & Rotmans, 2006). The General Santos City case illustrates how national policy pressures can catalyze systemic change, but also highlights challenges of local adaptation and ownership when participatory mechanisms are weak (Markard et al., 2012). In contrast, the Batangas City experience offers a glimpse into how iterative, community-led innovations can shape institutional behavior and embed sustainability through social learning (Smith et al., 2010; Frantzeskaki et al., 2012).

Transition management under a potential Trump 2.0 political landscape, characterized by reduced national support for climate and sustainability action, demands a recalibration of governance strategies. Here, the proposed Decentralized Adaptive Transition Management (DATM) framework becomes critical. Drawing from both local cases, DATM emphasizes reflexivity, localized agency, and multi-stakeholder collaboration as cornerstones for resilient sustainability governance (Rogge & Reichardt, 2016; Frantzeskaki et al., 2012). It argues for nested arenas of innovation, niche protection, and readiness to seize political openings, turning uncertainty into a resource rather than a barrier (Rotmans et al., 2001; Meadowcroft, 2009).

2. NATURE OF TRANSITIONS

Sustainability transitions can emerge through a variety of pathways, shaped by who initiates them, the context in which they unfold, and the governance mechanisms that enable or constrain their development. In the Philippines, two cases illustrate this diversity: the e-jeepney program in General Santos City and the zero-waste initiative in Batangas City. The former originated



from a national directive and evolved through localized implementation, while the latter grew from community-led efforts that were gradually embedded in formal policy. These contrasting starting points are particularly instructive in light of a potential Trump 2.0 administration, one likely to reduce or withdraw national support for sustainability efforts (Aberdeen Investments, 2025).

Table 1 presents a comparative overview of two sustainability transition cases in the Philippines: the e-jeepney program in General Santos City and the zero-waste initiative in Batangas City. At a glance, the two cases differ not only in terms of their thematic focus, transport versus solid waste, but also in how each transition was initiated, governed, and supported by various actors.

Table 1. Nature of Transitions

Aspect	Case 1: E-Jeepney Program	Case 2: Zero-Waste Program
Type of Transition	Socio-technical system transition	Community-based sustainability transition
Initiation	National policy (PUVMP) triggered by landscape pressure, with local adaptation	Local LGU and NGO-led initiative (e.g., Batangas City E-Code, MEF), then regime alignment
Primary Mechanism	Top-down policy opening niche space for innovation	Bottom-up niche experimentation influencing regime through social learning
Framework Fit	MLP (Top-down driven) + Transition Management + Regime-Niche Interaction	MLP (Bottom-up driven) + Transition Management + Transition Arenas
Governance Style	Top-down induced, with cooperative-based local adaptation	Bottom-up emergence, later supported by institutional embedding
Main Actors	DOTr, LGUs, transport cooperatives	Barangays, city government (CENRO), MEF, households

The e-jeepney transition emerged from a national policy directive, the Public Utility Vehicle Modernization Program (PUVMP), through Department Order No. 2023-022, which was later adopted and implemented at the local level (DOTr, 2023). This reflects a centrally initiated process, driven by regulatory pressure from the national government and executed through local coordination. Local actors such as transport cooperatives and city governments played key roles in operationalizing the program, particularly through efforts like fleet consolidation and route rationalization (Pontawe & Napalang, 2018). As noted by Markard et al. (2012), transitions initiated from the top often require navigating path dependencies and systemic lock-in, which can make local adaptation challenging without strong institutional support.

In contrast, the zero-waste initiative in Batangas City followed a bottom-up trajectory. It began with barangay-level actions supported by NGOs such as the Mother Earth Foundation, focusing on household waste segregation, community education, and the establishment of Materials Recovery Facilities (MRFs) (Marcial et al., 2016; WWF, 2023). These grassroots efforts were eventually institutionalized through city ordinances and the Batangas Environmental Code. This case reflects what Smith et al. (2010) describe as niche-level experimentation that gradually influences regime-level structures through social learning and civic engagement.

Governance styles between the two transitions also diverge. The e-jeepney program operated within a more hierarchical structure, characterized by top-down compliance and limited early-stage participation from affected stakeholders. As Frantzeskaki et al. (2012) argue, such transitions may struggle with legitimacy and long-term ownership if not coupled with participatory mechanisms. On the other hand, the zero-waste initiative demonstrates a more iterative and participatory style of governance, where communities defined problems, experimented with solutions, and adapted through learning, which are hallmarks of effective transition arenas (Loorbach & Rotmans, 2006; Frantzeskaki et al., 2012).

Finally, the composition of main actors in each case highlights the breadth of collaboration needed for transition success. The e-jeepney case depended heavily on the alignment between national agencies (like the DOTr) and local transport cooperatives, whereas the zero-waste transition drew strength from the sustained involvement of barangays, NGOs, city government units like the CENRO, and active household participation.

Together, these cases underscore that sustainability transitions do not follow a one-size-fits-all approach. Each emerges through a distinct interplay of institutional pressures, community dynamics, and actor configurations. Understanding these differences is essential, particularly in politically uncertain contexts like a Trump 2.0 administration, where national sustainability mandates may be diluted or obstructed, and local leadership must become the anchor of transition efforts (Meadowcroft, 2009).

3. TRANSITION PHILOSOPHY AND FRAMEWORK

The e-jeepney and zero-waste transitions in the Philippines illustrate more than just different policy approaches; they reflect two distinct philosophies of how societal change unfolds. To make sense of these trajectories, this section draws on two foundational frameworks: the Multi-Level Perspective (MLP) and Transition Management Theory (TMT). These frameworks help clarify not only the structure of transition processes but also the forms of governance needed to support them, especially in politically uncertain environments such as those anticipated under a Trump 2.0 scenario.

Figure 1 presents General Santos City’s E-Jeepney Transition (Top-down), showing how national policy, acting as a landscape-level disruption, intervened in the traditional jeepney regime and opened a pathway for innovation at the local level. In contrast, Figure 2 illustrates Batangas City’s Zero-Waste Transition (Bottom-up), depicting a transition driven by grassroots initiative, where community-based experimentation gradually shaped institutional change and led to the embedding of sustainability practices through participatory governance.

The MLP distinguishes between three levels that shape how sustainability transitions unfold: the niche level, where experimental practices and innovations are nurtured; the regime level, where prevailing norms, infrastructures, and institutional routines reside; and the landscape level, which captures the broader external context, such as political climates, economic pressures, or societal expectations, that exerts long-term pressure on the regime (Geels & Schot, 2007).

In the case of the e-jeepney program in General Santos City, the introduction of the PUVMP served as a landscape-level disruption. It challenged the long-entrenched system of traditional jeepney operations and demanded compliance with a modern, more regulated framework. Local adaptation followed, such as route consolidation, e-jeepney piloting, and cooperative formation, but this was largely reactive. The initiative’s top-down orientation meant that local stakeholders were expected to conform to externally defined goals, with limited opportunity to shape the vision or implementation process. As Markard et al. (2012) emphasize, transitions under such conditions often encounter systemic inertia, where structural dependencies and cultural attachments make deep transformation difficult.

Figure 1. General Santos City’s E-Jeepney Transition (Top-down)

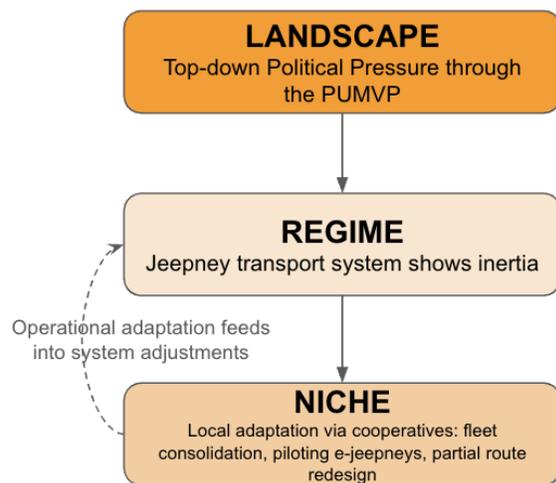
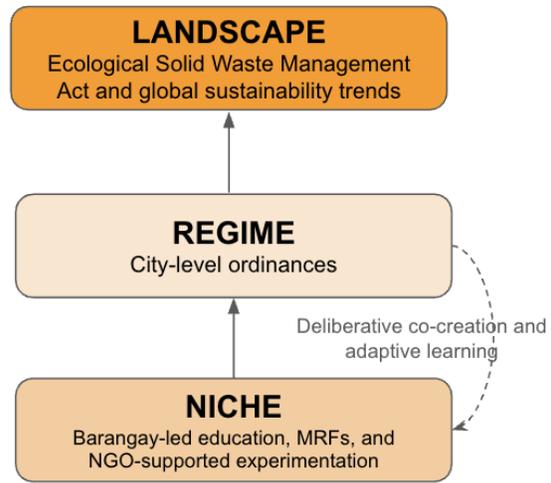


Figure 2. Batangas City’s Zero-Waste Transition (Bottom-up)



While concerns around compliance and adjustment were present in General Santos City, the city itself has demonstrated an ability to coordinate locally and mobilize stakeholders toward collective adaptation. Transport cooperatives such as 1TEAM played a proactive role in helping operators navigate the shift, offering organizational structure and financial pathways that made the transition more manageable (Pontawe & Napalang, 2018). Instead of widespread resistance, what emerged was a process of



pragmatic alignment, where local actors, though not the originators of the policy, worked collaboratively to make the transition workable within their context (Meadowcroft, 2009).

By contrast, the zero-waste initiative in Batangas City followed a bottom-up MLP trajectory. The community efforts to improve waste segregation, build MRFs, and promote sustainability awareness began as localized experiments. Supported by NGOs and eventually formalized through city ordinances, these niche innovations influenced regime structures and aligned with the broader goals of RA 9003 (Marcial et al., 2016; WWF, 2023). Unlike the e-jeepney case, this transition was not initiated by national policy but grew from local engagement, cultural alignment, and iterative learning (Smith et al., 2010).

While MLP offers a structural understanding of these dynamics, the Transition Management Theory (TMT) focuses on how transitions are governed in practice. It emphasizes participatory visioning, pilot experimentation, reflexive learning, and long-term commitment (Loorbach & Rotmans, 2006). In General Santos City's e-jeepney program, the elements of TMT appeared through cooperative-led pilots and local adjustments (Pontawe & Napalang, 2018). Yet, the top-down framing of the PUVMP limited stakeholder influence in shaping the vision or defining alternatives (Markard et al., 2012). In contrast, Batangas City's zero-waste initiative demonstrated a deeper integration of TMT principles. The transition arenas at the barangay level allowed stakeholders to identify problems, co-create strategies, and refine them through feedback and experience (Frantzeskaki et al., 2012). These arenas nurtured ownership and embedded sustainability into the city's policy fabric.

Taken together, MLP and TMT offer complementary perspectives; MLP shows where and how systemic change moves across levels, while TMT explains how that change can be supported through inclusive and adaptive governance. The two Philippine cases underscore that while top-down strategies can initiate rapid transformation, they may struggle with legitimacy and flexibility. Bottom-up transitions, though slower, often produce more resilient outcomes, especially when national coherence is weak or contested. As such, the Batangas City experience provides a compelling example of how locally rooted governance can sustain progress even under adverse political conditions, an insight particularly valuable in anticipating challenges under a Trump 2.0 policy environment.

4. TRANSITION MANAGEMENT

Managing sustainability transitions under a Trump 2.0 context requires more than policy blueprints; it demands adaptive, decentralized, and participatory strategies that reflect political uncertainty and localized agency. The e-jeepney and zero-waste transitions in the Philippines reveal how transition management can be applied differently depending on the structure of the initiative. To remain viable in an era of weakened national coordination, both models require adjustments that place emphasis on local leadership, reflexive governance, and institutional resilience.

The e-jeepney transition in General Santos City, while initiated through a strong national mandate, demonstrated the need for adaptive governance at the local level. To manage this transition effectively in a politically constrained (Trump 2.0) context, future efforts must reduce dependence on centralized subsidies and develop multi-actor coalitions that build local financing capacity and innovation ecosystems. This aligns with transition management principles advocated by Loorbach and Rotmans (2006), which emphasize the importance of inclusive visioning, experimentation, and learning loops. Local governments can serve as facilitators of "transition arenas," where transport cooperatives, financial institutions, technical experts, and commuters collaboratively shape strategies. Reflexivity is also key: policies must be responsive to on-the-ground realities, such as driver feedback, route performance, and financing gaps. By fostering distributed ownership and adaptive monitoring, e-jeepney programs can continue progressing even in the absence of national government leadership.

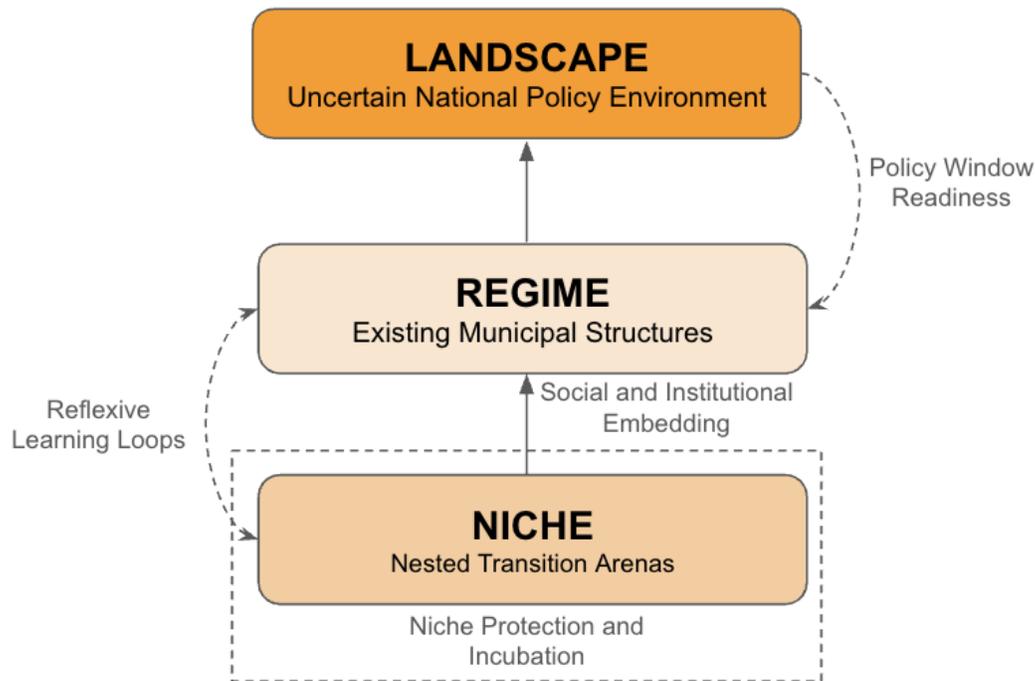
In the case of the zero-waste transition in Batangas City, transition management already plays a central role. Barangay-led implementation, community participation, and localized norm-setting demonstrate what Frantzeskaki et al. (2012) describe as effective transition arenas, spaces for shared learning, co-creation, and accountability. To scale this transition and enhance its resilience under Trump 2.0 conditions, management efforts must focus on strengthening these arenas through capacity-building of stakeholders, institutionalization of successful practices, and strategic use of municipal/city ordinances. Reflexive feedback systems, such as waste audits, education campaigns, and barangay-level data monitoring, can further embed behavioral change and improve adaptive capacity. The case suggests that when governance is participatory and grounded in community experience, transitions can evolve organically, even when national momentum is lost.

To guide sustainability transitions under Trump 2.0, this paper proposes a strategic approach rooted in a Decentralized Adaptive Transition Management (DATM) framework. This framework emerges from the realities demonstrated by both the e-jeepney and zero-waste cases, where adaptability, local participation, and institutional anchoring played crucial roles in advancing change. DATM recognizes that in politically fragmented or nationally unsupportive contexts, transitions must be governed from the ground up, through mechanisms that are responsive, inclusive, and self-reinforcing. Figure 3 illustrates the structure and key components of the DATM framework.

The DATM is a hybrid model that draws from the Multi-Level Perspective (MLP) and Transition Management Theory (TMT), but it adapts them to conditions of weak national alignment similar to a Trump 2.0 scenario. It emphasizes the role of local actors, barangays, NGOs, cooperatives, and municipal governments, in initiating and steering transitions. Central to DATM are nested transition arenas, where stakeholders collaboratively frame problems, experiment with solutions, and learn through iteration. Innovations developed in these protected spaces can gradually influence the regime level through processes of social and institutional embedding.

The framework also emphasizes reflexive learning loops, where feedback from implementation informs adjustment and scaling, and niche protection and incubation, ensuring local initiatives have the space and support to evolve. Critically, DATM introduces policy window readiness as a strategic component, urging local regimes to be alert to external shifts, such as political openings or crises, that can be leveraged to advance sustainability goals.

Figure 3. DATM Framework



Rather than relying on a linear path or centralized mandates, DATM offers a strategic architecture composed of five interdependent components: Nested Transition Arenas, Niche Protection and Incubation, Reflexive Learning Loops, Policy Window Readiness, and Social and Institutional Embedding. Together, these elements allow transitions to be both decentralized and adaptive, qualities essential for navigating the uncertainty and volatility that define the Trump 2.0 political climate.

1. **Nested Transition Arenas.** These are multi-level, participatory spaces where deliberation, vision-building, and decision-making occur among diverse actors. Barangays, cooperatives, sectoral group(s) of concern, and LGUs function as transition arenas by hosting forums, consultations, and planning sessions that shape context-sensitive strategies. This structure empowers communities to move from passive implementation to proactive co-creation.
2. **Niche Protection and Incubation.** Transitions rely on localized or niche innovations that often challenge the status quo. These innovations must be shielded, through funding, policy flexibility, and technical support, until they gain traction. For instance, the early fleet pilots of ITEAM and the barangay MRFs in Batangas illustrate how protected spaces allow new models to emerge and evolve without premature exposure to dominant regime pressures.
3. **Reflexive Learning Loops.** DATM encourages institutional learning through structured monitoring and feedback systems. Rather than linear implementation, policies and practices are reviewed, adapted, and refined. This reflexivity fosters accountability and responsiveness, as seen in Batangas City's use of waste audits and General Santos City's route optimization based on driver input.
4. **Policy Window Readiness.** Transitions are not always planned; they are often accelerated by crises or shifts in public sentiment. DATM calls for readiness, through flexible planning, scenario building, and agile leadership, to seize



moments when political, economic, or social windows open. The COVID-19 pandemic's impact on mobility patterns and plastic consumption serves as an example of when such readiness is essential.

5. **Social and Institutional Embedding.** For transitions to endure, they must be woven into the social fabric and the formal rules of governance. DATM encourages integration of sustainability objectives into development plans, educational systems, budget allocations, and municipal codes. The formalization of zero-waste practices in Batangas through local ordinances illustrates this long-term anchoring.

In summary, the DATM framework provides a transition management strategy that is flexible enough to operate in decentralized settings and robust enough to respond to volatility. It does not abandon national leadership, but it acknowledges that where such leadership is absent or contested, local networks, anchored in shared vision and learning, must take the lead.

This management approach does not reject national coordination; it simply recognizes that under hostile or fragmented political conditions, like those of Trump 2.0, local agency becomes the foundation of sustainability. Transition management in this context requires not just innovation but resilience, co-ownership, and strategic navigation of power dynamics (niche-regime-landscape triad interaction).

By localizing decision-making and building durable coalitions, both the e-jeepney and zero-waste transitions offer practical lessons on how to manage systemic change from the ground up. Their continued evolution under Trump 2.0 will depend on how effectively communities can steer, adapt, and sustain transitions in the face of political headwinds.

5. CONCLUSION

Sustainability transitions are rarely linear journeys; they are lived processes shaped by power, culture, politics, and possibility (Shove & Walker, 2010). The Philippine cases of the e-jeepney and zero-waste initiatives remind us that transitions emerge not only from grand policies or technological innovations but from the interplay of everyday decisions, community agency, and institutional courage. In times when national coherence is at risk, as it may be under a Trump 2.0 administration, local transitions must not merely persist, but lead.

The Decentralized Adaptive Transition Management (DATM) framework offers a practical compass for this terrain. It rejects both rigid centralization and laissez-faire pluralism. Instead, it calls for intentional, value-driven, and feedback-rich governance where barangays, cooperatives, NGOs, and local governments are no longer peripheral actors but protagonists in shaping sustainable futures (Frantzeskaki et al., 2012; Loorbach, 2010). Sustainability, in this view, is not an endpoint; it is a continuous negotiation between what is possible and what is just (Meadowcroft, 2009).

Transitions rooted in a shared vision, tailored to local realities, and strengthened by reflexive learning offer the most resilient path forward. Even amidst global political regression, communities equipped with collective resolve and adaptive capacity can propel systemic change, not by awaiting external approval, but by embodying the future they envision.

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AUTHORS CONTRIBUTION

Fernando B. Enad: Writing – review & editing, Writing – original draft, Methodology, Data Curation, Conceptualization.

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Leonora H. Astete: Writing – review & editing.

Alessandra Atienza: Writing – review & editing.

Jonathan D. Maliwat: Writing – review & editing.

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ETHICS APPROVAL

Not applicable.

DECLARATION OF COMPETING INTEREST

Authors have no conflict of interest to declare, and the manuscript has not been published or is under any consideration for publication elsewhere.

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