

Youth Climate Activism Democratizes Nbs Policy via Environmental Justice Triad

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Abstract

Youth climate activism typically emphasizes global protests, yet institutional models in the Global South remain underexplored. Here we analyze the Young Environmental Ambassadors program in São Carlos, Brazil, where elected high-school students operationalize environmental democracy's three pillars (information, participation, justice) through MPSP facilitated hearings on nature-based solutions (NbS). Questionnaire data (n = 10), interviews (n = 5), and observations (n = 12 meetings) reveal curriculum-aligned training informed council elections and hearings addressing Espraiado Stream water governance, Bicão Park greenspace protection, and Cidade Aracy waste management, yielding Municipal Law 21.458/2023. Prosecutorial facilitation in affected schools positioned youth as community-state mediators, preventing radicalization via institutional channels. This scalable triad integration offers Global South municipalities a replicable NbS governance model, building long-term climate resilience absent in transnational protest frameworks.

INTRODUCTION

Youth climate activism often focuses on global protests, yet locally embedded initiatives in the Global South remain underexplored. Here we show that the Young Environmental Ambassadors program in São Carlos, Brazil, a hybrid of critical education, participatory governance and Public Prosecutor's Office (MPSP) facilitation, operationalizes environmental democracy's three pillars (information, participation, justice) to drive climate-resilient actions on water governance and urban green spaces. Integrating qualitative data from interviews, observations and policy documents, we demonstrate how youth protagonists influenced local laws (e.g. São Carlos Municipal Law no. 21.458/2023) and public hearings on climate risks, catalyzing nature-based solutions (NbS) with replicable potential for just transitions. We have identified this as the first documented Brazilian case in which youth climate activism has been systematically institutionalized through prosecutorial facilitation mechanisms.

The escalating climate crisis demands inclusive governance, yet youth roles are typically limited to transnational advocacy¹. Studies emphasize participation for legitimacy and green transitions^{2,3} but overlook institutional enablers like prosecutors in the Global South, where just transitions risk deepening inequalities without territorial democracy^{4,5}.

In Brazil, youth councils and educommunication show promise^{6,7}, but hybrid models integrating education, activism and legal mediation are rare. The São Carlos Ambassadors (launched in 2019) fill this gap: elected high-school students address climate adaptation via NbS, e.g., Espraiado Stream water management, Bicão Park greenspace protection and waste reduction, facilitated by MPSP hearings in affected schools, filling this gap as a case study on youth environmental protagonism as a human right in São Carlos-SP⁸.

This article reconceptualizes climate activism as a form of institutionally mediated civic action, in which legal facilitation transforms youth mobilization into durable governance outcomes rather than external pressure alone. We analyze this as climate activism: youth not only educate but mobilize communities, report risks and co-shape policies, embodying environmental justice⁹. Our findings reveal how such initiatives democratize local climate action, offering a scalable model for Global South resilience aligned with Escazú

Agreement¹⁰ and SDG 13. We propose a first documented and pioneering model of institutionally mediated climate activism in which prosecutorial facilitation transforms youth mobilization into durable governance outcomes.

METHODOLOGY

Study design

We conducted a qualitative case study of the Young Environmental Ambassadors program (launched in 2019) in São Carlos, São Paulo, Brazil, to examine youth-led climate activism through environmental democracy's three pillars (information, participation, justice). This approach enabled in-depth analysis of institutional dynamics linking education, prosecution and local NbS governance.

Data collection

Data comprised structured interviews (n = 5) with program founders and coordinators (Education Directorate, MPSP); participant observation of 12 monthly meetings, 3 public hearings (Espiraído Stream, Bicão Park, Cidade Aracy waste) and community campaigns (2019–2024); and analysis of 15 institutional documents (Law no. 21.458/2023¹¹, MPSP records, selection protocols). A structured questionnaire (n = 10 items) assessed pillar implementation across themes.

Data analysis

Thematic analysis cross-referenced empirical data with Brazilian Child and Adolescent Statute (Law no. 8.069/1990; ECA)¹², Youth Statute (Law no. 12.852/2013; EY)¹³, international agreements (Escazú, Aarhus) and climate justice literature. Observations were triangulated with interview transcripts and documents. Anonymity was maintained throughout. Procedures involving human participants complied with Brazilian ethical standards (Resolution CNS 466/2012) and were approved by the Research Ethics Committee of the Federal University of São Carlos (UFSCar) through Brazil Platform (77866724.8.0000.5504). Written informed consent was obtained from all participants prior to data collection.

Replicability

Data (anonymized transcripts, codes) are available upon request from the corresponding author and have been deposited in the UFSCar institutional repository, with temporarily restricted access, at the following link: <https://hdl.handle.net/20.500.14289/23667>.

RESULTS

The Young Environmental Ambassadors program, launched in 2019 by São Carlos Education Directorate with state secretariats, elects high-school students via student councils as environmental leaders. Beyond education, ambassadors (n ≈ 20/year) implement NbS: selective waste campaigns reaching

families/communities, water governance (Espiraído Stream), urban greenspace protection (Bicão Park), and solid waste management (Cidade Aracy).

The São Paulo Public Prosecutor's Office (MPSP) holds hearings in affected schools, positioning ambassadors as mediators between vulnerable communities and authorities, highlighting the importance of facilitating agents in popular participation in environmental issues¹⁴. Youth contributed to Law no. 21.458/2023¹², formalizing the program in municipal education, demonstrating policy influence. Monthly meetings (n = 12 observed) and external events (Brazilian Congress of Municipalities and Sanitation Providers; ASSEMAE Congress) extend impact beyond schools.

This hybrid model channels youth energy into institutional arenas, reducing risks of confrontational activism observed globally (e.g., digital hostility targeting leaders). Structured access to information/hearings fosters informed protagonists who bridge communities-state, aligning with Escazú/Aarhus^{10,16} principles while delivering tangible NbS outcomes.

QUESTIONNAIRE EVIDENCE

Figure 1 illustrates the conceptual model linking environmental democracy's triad to NbS policy outputs, validated by questionnaire evidence (Table 1). Youth operationalization flows from pillar-specific mechanisms to measurable climate resilience outcomes.

Source: authors.

Table 1 summarizes questionnaire evidence (n = 10) demonstrating how Young Ambassadors operationalize environmental democracy's triad, yielding concrete NbS outcomes from community literacy to municipal Law no. 21.458/2023¹¹.

Table 1

Youth ambassadors operationalize environmental democracy triad (n = 10 questionnaire items)¹

Pillar	Key mechanism	Evidence (Q#)	NbS outcome
Information	SDG training + science fairs	Q6.1, Q9	Community NbS literacy (water, waste)
	Public events + exhibitions	Q6, Q9	Extended environmental reach
Participation	Student council elections	Q4	Legitimate youth representation
	MPSP hearings + City Council	Q9	Law no. 21.458/2023 formulation
	Monthly meetings (n = 12)	Q7, Q8	Waste reduction practices (Q12.4)
	ASSEMAE Congress participation	Q12.9	External network influence
Justice	MPSP WhatsApp reporting	Q10	Active environmental oversight
	Institutional recognition	Q12	Formal program status
	Policy influence	Q12	Municipal law institutionalization
	Socio-environmental responsibility	Q12.5	Cultural transformation

Source: compiled by the authors based on responses from the Regional Directorate of Education of the São Paulo State Department of Education

[1] **Legend:** Questionnaire data (n=10 items) from São Carlos Education Directorate. Q# corresponds to structured items mapping Young Ambassadors' actions (2019-2024) across environmental democracy's information-participation-justice triad to measurable NbS outcomes. Source: authors' compilation.

Information pillar: training and dissemination

The São Carlos Regional Education Directorate defined priority environmental themes aligned with São Paulo Curriculum and 2030 Agenda priorities (Q6.1), ensuring public relevance. High-school ambassadors (n ≈ 20/year) received structured training covering SDGs, climate adaptation, water governance and socio-environmental risks through workshops, science fairs, live events and community campaigns (Q9), complementing student protagonism in environmental education¹⁵. Communication extended beyond classrooms via environmental exhibitions and content production shared with school publics and wider communities (Q6,9).

MPSP prosecutor confirmed youth impact: *"Contributed greatly to information of public interest dissemination regarding Public Prosecutor's Office procedures related to the Environment"* (interview). Ambassadors disseminated educational materials to families and neighbors, creating informational

capillarity. Direct communication with authorities "*facilitates the understanding of public bodies functioning*", bridging institutional knowledge gaps essential for climate justice procedures.

This systematic access, curriculum integration (Q6.1), hands-on training (Q9), community dissemination (Q6,9) operationalizes Aarhus Convention Article 4 (environmental information access) and Brazil Constitution Article 5 XIV (information rights)¹⁷. Unlike symbolic youth engagement, ambassadors became active knowledge multipliers, extending NbS literacy (water/stream management, urban greenspaces) from schools to vulnerable communities.

Structured information flow prevents uninformed protest activism observed globally, channeling youth energy into institutional NbS advocacy. Informed participation in MPSP hearings on Espiraiado Stream governance demonstrates practical climate resilience outcomes, offering Global South municipalities a replicable model where youth bridge community-state gaps for equitable environmental democracy.

Participation pillar: elections and hearings.

Student councils democratically elected ambassadors as Social Relations Coordinators, selecting peers with proven communicative and mobilization skills (Q4). This internal process conferred immediate legitimacy while developing essential political competencies. Beyond classrooms, ambassadors actively participated in public environmental hearings convened by the MPSP and City Council, serving as direct interlocutors between school communities, authorities, and broader society (Q9). Monthly meetings (n = 12 observed) sustained deliberative processes, generating concrete environmental actions through collective planning (Q7,8). Tangible community outcomes included waste separation and reduction practices extending from schools to families (Q12.4). The MPSP prosecutor emphasized their impact: "*Young Ambassadors participated in several public hearings... always held in schools near the affected areas... demonstrated active participation... MPSP recognizes their legitimacy to debate any environmental matter*", specifically addressing Espiraiado Stream water governance, Bicão Park urban greenspace protection, and Cidade Aracy solid waste management.

By strategically locating hearings in affected state schools, these institutions became concrete arenas of territorialized climate justice, positioning ambassadors as essential mediators between vulnerable communities and institutional power. This arrangement operationalizes Principle 10 of the Rio Declaration (1992)¹⁸ alongside Brazilian legislation including the Child and Adolescent Statute (Law 8.069/1990)¹² and Youth Statute (Law 12.852/2013)¹³, which mandate participatory rights for young citizens.

Structured electoral processes (Q4) combined with sustained hearing participation (Q9) and monthly deliberation (Q7,8) transform potential protest energy into institutional influence, circumventing the hostile digital confrontations that disproportionately target youth leaders globally. The resulting NbS outcomes, stream restoration, greenspace preservation, waste systems, plus Law no. 21.458/2023¹¹ formalization demonstrate scalable policy impact. This São Carlos model offers Global South municipalities an alternative to disruptive activism: elected youth accessing prosecutorial facilitation channels yield measurable green-blue infrastructure while building civic competencies through praxis-aligned monthly deliberation (Q7,8).

Justice pillar: reporting and policy influence.

Questionnaire data show ambassadors actively used MPSP WhatsApp channels for environmental reporting and participated in oversight hearings (Q10). They received formal recognition from Education Board, City Council, and local businesses, validating youth leadership (Q12). Direct policy impact included Law no. 21.458/2023 formulation, institutionalizing the program in municipal education. MPSP prosecutor highlighted: *"Broadened access to climate justice... young people recognized MPSP as environmental rights defender... comfortable using complaint channels including public hearing microphones"*. Interaction built procedural knowledge for water scarcity, floods, and waste issues through "visits, hearings, everyday coexistence" demystifying justice system operations.

This operationalizes Stockholm (1972)¹⁹, Rio Principle 10 (1992)¹⁸, and Aarhus Convention (1998)¹⁶ justice access, plus Brazilian ECA/EY rights. Beyond judicial remediation, ambassadors fostered preventive monitoring and cultural environmental responsibility in families/schools/communities (Q12.5-6), transforming potential protest demands into institutionalized NbS delivery.

Youth-MPSP collaboration prevented radicalization by equipping communities with concrete climate risk response mechanisms. Direct hearing participation yielded structural outcomes (Law no. 21.458/2023)¹¹ while building long-term adaptation capacity. São Carlos demonstrates integrated pillar execution: information (training), participation (hearings), justice (policy change), creating scalable Global South model where prosecutorial facilitation channels informed youth energy into resilient green-blue infrastructure governance without confrontation.

YOUTH EMPOWERMENT AND ENVIRONMENTAL DEMOCRACY

The Young Environmental Ambassadors program operationalizes environmental democracy through interdependent pillars: information, participation, and justice (Fig. 1)^{3,6}. Information access (Aarhus/Escazú)^{16,10} enables informed participation (Rio Principle 10)¹⁶, culminating in justice via accountability (Stockholm 1972)¹⁹.

Data confirm integration: curriculum/SDG training (Q6.1,9) informed council elections/hearings (Q4,7,9), yielding policy outputs like Law no. 21.458/2023 and NbS implementation (Q10,12). MPSP-facilitated hearings in affected schools bridged communities-authorities, with ambassadors reporting irregularities via WhatsApp while gaining procedural literacy.

This triad prevents radicalization: structured channels transform protest potential into institutionalized NbS delivery (Espiraído water, Bicão greenspace, Aracy waste), reducing digital asymmetries²⁰. Prosecutor: *"Youth will be adults with environmental experience and public body affinity"*, predicting sustained adaptation capacity.

Latin American context amplifies relevance: youth articulate territorial rights against inequalities²¹, with São Carlos exemplifying procedural triad efficacy. Limitations include scale (municipal focus); future work should test multi-city replication. Overall, institutional youth facilitation scales green-blue resilience, fostering legitimacy without confrontation, a Global South template for COP30-aligned governance.

FINAL CONSIDERATIONS

Youth participation through environmental democracy's triad transforms decision-making for sustainability, operationalizing popular sovereignty via deliberation, control, and co-responsibility. São Carlos data confirm institutional-pedagogical practices convert youth into autonomous agents delivering NbS actions connecting communities, authorities, and civil society.

MPSP facilitation proves critical: prosecutorial mediation guarantees participation/justice rights, expanding deliberative governance essential for Global South climate resilience. Prosecutor's insight *"today's ambassadors will be environmentally experienced adults with public body affinity"* reveals long-term capacity-building beyond projects, creating legally-literate cohorts for sustained climate decision-making.

Latin American environmental justice demands intersectional recognition of vulnerable communities' cultural/territorial rights, positioning youth as articulators against discrimination. São Carlos demonstrates triad integration prevents radicalization: informed participation (institutional hearings) policy transformation, yielding Law no. 21.458/2023 and NbS implementation without confrontation.

Limitations include municipal scale; multi-city replication needed. Policy implication: prosecutorial facilitation scales green-blue resilience via youth institutionalization, offering COP30-ready Global South template where deliberation builds adaptation capacity absent in transnational protest models.

Beyond documenting a municipal case, this study advances climate activism theory by conceptualizing institutionally mediated climate activism as a distinct pathway of civic mobilization. Rather than positioning youth activism primarily as external pressure on the state, our findings show how prosecutorial facilitation can transform mobilization into co-produced governance outcomes. This reframing challenges protest-centered accounts of climate activism and demonstrates that institutional incorporation need not dilute mobilization; instead, it can stabilize and scale its impact through durable legal and policy change. According to findings in international literature, this model stands out as a pioneer in youth climate activism.

Declarations

Competing interests

The authors declare no competing interests.

Ethical standards

Research procedures involving human participants adhered to Brazilian ethical guidelines (Resolution CNS 466/2012 of the National Health Council) and were approved by the Research Ethics Committee of the Federal University of São Carlos (UFSCar) through Brazil Platform (77866724.8.0000.5504). Written informed consent was obtained from all participants prior to data collection.

Author Contribution

C.M.O.: conceptualization, methodology, investigation, writing (original draft, supervision). O.P.A.J.: data curation, formal analysis, writing (review & editing). A.A.: validation, resources, writing (review & editing).

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Data Availability

Due to the confidential nature of interviews and participant observation notes, full transcripts cannot be shared publicly. Anonymized excerpts, questionnaire responses (Table 1 source data), coding frameworks, and institutional documents are available from the corresponding author upon reasonable request. Data and analysis have been deposited at UFSCar intuitional repository (<https://hdl.handle.net/20.500.14289/23667>).

References

1. UNDP. Juventude, democracia e desenvolvimento: a chave para uma governança inclusiva e sustentável. New York: PNUD; 2024. Available from: <https://undp.org>.
2. OECD. Government at a Glance 2025. Paris: OECD Publishing; 2025. doi:10.1787/0efd0bcd-en.
3. Sampaio JAL. Democracia ambiental como direito de acesso e de promoção ao direito ao meio ambiente sadio. *Conpedi Law Rev.* 2016;1(11):149–76. doi:10.26668/2448-3931_conpedilawreview/2015.v1i11.3445.
4. Lehmann R, Alarcón P. "Just transition" in the Global South: mission impossible? The perils of the transition in Mexico and Ecuador. *J Entwicklungspolit.* 2023;39(3–4):37–61.
5. Ogunbode CA, Doran R, Ayanian AH, Park J, Utsugi A, Van der Broek KL, Ghorayeb J, Aquino SD, Lins S, Aruta JJBR, Reyes MES, Zick A, Clayton S. Climate justice beliefs related to climate action and policy support around the world. *Nat Clim Chang.* 2024;14: 1144–1150. doi:10.1038/s41558-024-02168-y.
6. Oliveira CM. Reflexos da participação política sobre a trilogia de direitos da democracia ambiental. *Rev Am Urban Medio Ambient.* 2022;7:89–136.
7. Luz K. A força das juventudes na luta pelo clima: protagonismo e democracia ambiental. *Rev Casa Comum.* 2024. Available from: <https://revistacasacomum.com.br/protagonismo-das-juventudes-diante-da-crise-climatica/>.
8. Oliveira CM, Aragão A. Protagonismo juvenil ambiental como direito humano: estudo de caso dos jovens embaixadores ambientais de São Carlos-SP. *Rev Direito Ambient.* 2024;29(116).
9. Almeida P, Márquez LRG, Fonsah E. The forms of climate action. *Sociol Compass.* 2024;18(2):e13177. doi:10.1111/soc4.13177. Brasil. Lei nº 12.852, de 5 de agosto de 2013. Estatuto da Juventude. *Diário*

- Oficial da União*; 2013. Brasil. Lei nº 8.069, de 13 de julho de 1990. Estatuto da Criança e do Adolescente. *Diário Oficial da União*; 1990.
10. CEPAL. Acordo Regional sobre Acesso à Informação, Participação Pública e Justiça em Assuntos Ambientais na América Latina e no Caribe (Acordo de Escazú). Santiago: CEPAL; 2018.
 11. São Carlos. Lei nº 21.458, de 20 de abril de 2023. Cria o Programa Embaixadores Ambientais como programa de educação socioambiental na rede pública municipal de São Carlos (2023). Available at: <https://servico.saocarlos.sp.gov.br/legislacao/leis/3549/lei21458-digital.pdf> (accessed 23 February 2026).
 12. Brazil. Lei nº 8.069, de 13 July 1990. Estatuto da Criança e do Adolescente. Presidência da República (1990). Available at: https://www.planalto.gov.br/ccivil_03/leis/l8069.htm (accessed 23 February 2026).
 13. Brazil. Lei nº 12.852, de 14 August 2013. Dispõe sobre a Política Nacional de Resíduos Sólidos. Presidency of the Republic (2013). Available at: https://www.planalto.gov.br/ccivil_03/_ato2011-2014/2013/lei/l12852.htm (accessed 23 February 2026).
 14. Sousa ICN, Oliveira CM. A participação popular em questões ambientais: a importância dos agentes facilitadores. In: Veiga FS, et al., eds. *Direitos Fundamentais e COP30*. Porto: Iberojur Science Press; 2025. p.232 – 46.
 15. Peperaio EPT. Educação ambiental e protagonismo estudantil: um compromisso da comunidade escolar. *Rev FESA*. 2024;3(23):1–12.
 16. UNECE. Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention). Geneva: UNECE; 1998.
 17. Brasil. Constituição da República Federativa do Brasil. Brasília; 1988.
 18. United Nations. *Rio Declaration on Environment and Development*. United Nations Conference on Environment and Development, Rio de Janeiro, Brazil, 3–14 June 1992. Available at: https://www5.pucsp.br/ecopolitica/projetos_fluxos/doc_principais_ecopolitica/Declaracao_rio_1992.pdf (accessed 23 February 2026).
 19. United Nations. *Report of the United Nations Conference on the Human Environment*. Stockholm, 5–16 June 1972. United Nations, New York (1973). Available at: <https://docs.un.org/en/A/CONF.48/14/Rev.1> (accessed 23 February 2026).
 20. Uba K, Segerberg A, Magnani M. Climate clash: a multimodal analysis–Counter-movement Interactions in the Digital Sphere. *Am Behav Sci*. 2025;69(1):104–37. doi: 10.1177/00027642251377868
 21. Carruthers DV. Popular environmentalism and social justice in Latin America. In: Carruthers DV, ed. *Environmental justice in Latin America: problems, promise, and practice*. Cambridge: MIT Press; 2008. p. 1–22. doi: 10.7551/mitpress/9780262033725.003.0001.
 22. Acknowledgements This work was supported by the São Paulo Research Foundation (FAPESP) [grant number 2022/14235-9] and CEDA (UFSCar Environmental Democracy Research Group). We thank Education Directorate and MPSP São Carlos for access and the Young Ambassadors for participation.

Figures

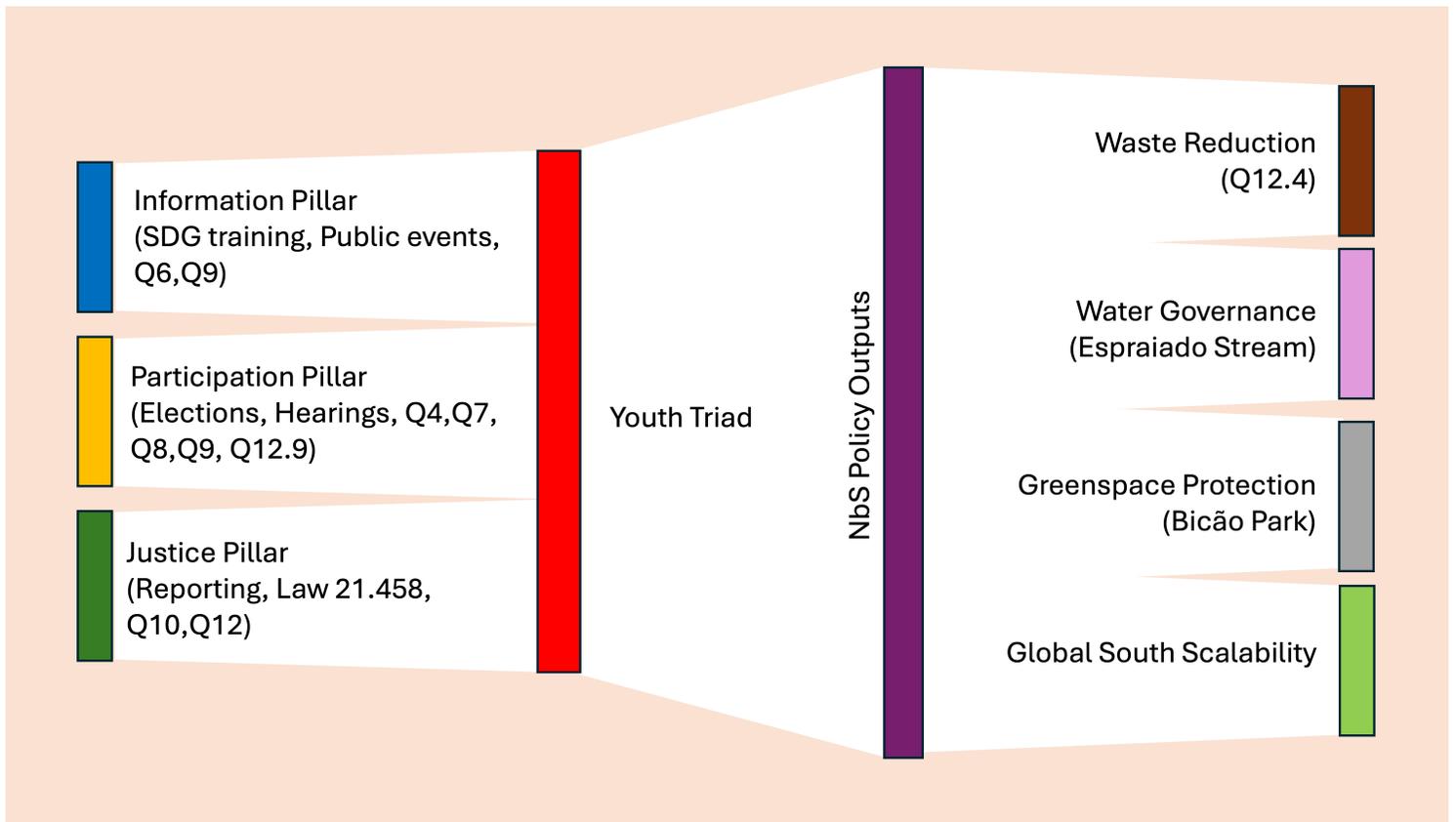


Figure 1

Youth-led environmental democracy triad drives NbS policy (2019-2024)[1]

Source: authors.

[1]Sankey diagram showing pillar flows to NbS outcomes. Data: n=10 questionnaire, n=5 interviews, n=12 observations. Source: authors.