Ecuador

Zero Carbon and Climate Resilience Readiness Framework - Enablig Actions Matrix

								ENABLING ACTIONS (What?)					
ID	**READINESS GOALS (per Pillar)**	**DATE**	**STAKEHOLDERS**	**CORE COMPONENTS**				**MILESTONE & SUBGOAL 1**	**MILESTONE & SUBGOAL 2**	**MILESTONE & SUBGOAL 3**	**MILESTONE & SUBGOAL 4**	**MILESTONE & SUBGOAL 5**	**INDICATORS**
G	**Government Leadership**	**When?**	**Who?**	**Energy Efficiency**	**Operational**	**Embodied**	**Resilience**	**MILESTONE & SUBGOAL 1**	**MILESTONE & SUBGOAL 2**	**MILESTONE & SUBGOAL 3**	**MILESTONE & SUBGOAL 4**	**MILESTONE & SUBGOAL 5**	**INDICATORS**
G1	Existence of mandatory regulations and/or performance requirements related to a national goal of zero carbon in buildings	2029	Ministry of the Environment, Ministry of Urban Development and Housing, Ministry of Production, Ministry of Energy and Mines	√	√	√		Establish working groups on the decarbonization of the built environment with the most relevant stakeholders.	Defining governance, an agenda for developing public policy, decree, or regulation in line with the NDCs	Develop a public policy with its corresponding regulations or law to ensure mandatory use.	Approve and publish the public policy with its regulations	Monitor compliance with the law related to building performance to achieve national decarbonization goals.	Number of buildings that meet the performance requirements specified in the law or regulations
G2	Existence of a National Energy Efficiency Policy or Strategy for the construction and operation of buildings	2029	Office of the Comptroller General of the State, Ministry of the Environment, Ministry of Urban Development and Housing, Ministry of Production, Internal Revenue Service, Decentralized Autonomous Governments	√	√	√		Update standards and review the objectives of the National Energy Efficiency Strategy.	Facilitate access to sustainable construction materials and promote material labeling.	Achieve market standardization.	Create incentives for the sector	Promote carbon footprint elimination projects.	Percentage of progress on the draft strategy
G5	Existence of a National Climate Resilience Policy or Strategy for the construction sector and its value chain	2029	Chambers, Unions, Customs, Council of Higher Education, Private Sector, CEES	√	√	√	√	Generate the first technical draft of the National Strategy.	Generate an emissions inventory	Generate financial and tax incentives.	Establish an MRV system	Increase the carbon footprint reduction rate by 2036.	Percentage of GADs (Decentralized Autonomous Governments) incorporating climate risks into their Land Use Plans (PDOT)
G3	Existence of a National Decarbonization Policy or Strategy for the construction sector and its value chain	2031	Office of the Comptroller General of the State, Ministry of the Environment, Ministry of Urban Development and	√	√	√	√	Achieve issuance of the standard.	Generate a diagnosis of climate vulnerability in the country by region	Incorporate carbon footprint criteria in public procurement.	Create an oversight committee	Incorporate topics on decarbonization of the construction sector into curricula.	Percentage of CO2 emissions reduction
G6	Availability and access to a local carbon market (Measurement, Reporting and Verification)	2030	Ministry of the Environment, Civil Society, Decentralized Autonomous Governments, Ministry of Urban Development and Housing, Accredited Laboratories	√	√	√	√	Update and expand the standard and inform all construction stakeholders.	Generate an emissions and carbon footprint inventory	Accredit and increase the number of laboratories that conduct measurement studies.	Create tax incentives for building owners and construction companies	Create affordable and/or low-cost laboratories, promoted by international organizations.	Number of active financial mechanisms (bonds)
G7	Incorporation of more ambitious mitigation and adaptation commitments for the sector in the NDCs	Assessment 2027 New initiatives 2030	Ministry of the Environment	√	√		√	Disseminate the NDCs to the construction sector.	Form working groups with different stakeholders in the construction sector to analyze the incorporation of new commitments in the NDCs.	Establish strategic dialogues with the public sector to analyze the possibility of including more ambitious commitments.	Follow up on approaches with the public and private sectors to determine initiatives to incorporate	Define new commitments to be incorporated into the NDC after analyzing all contributions from the different parties.	Number of initiatives incorporated into the NDC
G4	Availability of regulations aligned with zero carbon certification systems	2030	Material Suppliers, Municipalities, Control Entities, Ministry of the Environment, Construction Unions, Private Sector (Measuring Companies)	√	√	√		Create stricter regulations for measuring and monitoring manufacturing and construction processes.	Train and educate on national and international regulations so that the workforce has the technical capacity to oversee.	Create databases and systems for real carbon footprint measurement.	Create funds for studies that can measure and reduce the carbon footprint	Disseminate the importance of reducing the carbon footprint in spaces such as webinars, workshops, and training sessions, promoted by the Ministry of Environment and the Ministry of Urban Development and Housing.	Number of certified buildings
T	**Technical Solutions**	**When?**	**Who?**	**Energy Efficiency**	**Operational**	**Embodied**	**Resilience**	**MILESTONE & SUBGOAL 1**	**MILESTONE & SUBGOAL 2**	**MILESTONE & SUBGOAL 3**	**MILESTONE & SUBGOAL 4**	**MILESTONE & SUBGOAL 5**	**INDICATORS**
T4	Availability of renewable energies for integration into the decarbonization pathway of buildings	2026	Representatives of the private sector in the value chain, academia, CEES (Centralized Education and Training Centers), public institutions		√		√	Develop a diagnosis of the state of the national energy matrix and the renewable generation technologies available in the country.	Develop a technical document on available renewable energy sources with results, conclusions, and recommendations.	Approval and publication of the technical document	Implement necessary tax incentives for the installation of solar photovoltaic systems in residential and commercial buildings.	Develop training programs for architects and builders on the integration of renewable energy and energy efficiency technologies into building design.	Percentage of new and renovated buildings using renewable energy for their energy supply
T6	Training in selection criteria of technical solutions for decarbonization and climate resilience	2026	Academy, colleges, international funders, private banks, chambers of commerce, public and private sectors.	√	√	√	√	Develop awareness campaigns and workshops with stakeholders.	Establish links with industry to develop guidance notes.	Develop an accessible educational platform for stakeholders	Develop online and in-person training courses on sustainable technologies and selection criteria.	Organize practical workshops with sustainability experts to train local professionals.	Number of people trained/Number of stakeholders
T7	Incorporation of climate resilience strategies from project planning and design	2028	Academy, colleges, international funders, private banks, chambers of commerce, public and private sectors,	√	√		√	Establish a baseline of the current state of construction in Ecuador	Conduct a diagnostic of the sector and its vulnerability in Ecuador.	Develop an Action Plan	Identify measures to be implemented	Medición del impacto de las medidas implementadas	Number of certified projects/Total projects
T3	Availability of technologies for the implementation of energy efficiency strategies and improvement of energy performance from the design stage	2027	Academy, colleges, international funders, private banks, chambers of commerce, public and private sectors.	√	√	√		Identify existing technologies for implementing energy efficiency strategies	Adapt technologies to Ecuador's reality.	Disseminate the most applicable technologies to Ecuador	Implementation of technologies as minimum construction requirements	Promover la creación de un catálogo de tecnologías eficientes y sostenibles accesibles para facilitar su selección en el diseño de edificaciones.	Return on investment (time and financial savings)
T2	Establishment of public commitments by the private sector to decarbonize their assets and make them climate resilient	Q4- 2025 Q1-2026	Public and private sector, international funders, international organizations	√	√			Research the status of climate change mitigation and adaptation initiatives	Define clear objectives and parameters for the private sector.	Disseminate to the private sector	Establish private sector components by sector (mandatory)	Desarrollar un sistema de monitoreo y reporte de avances que permita a las empresas públicas y privadas hacer seguimiento a sus compromisos	Number of aligned companies/Total number of private sector companies
T1	Having a clear and agreed definition of zero carbon and resilient buildings	2026	Ministry of the Environment, Ministry of Urban Development and Housing, Ministry of Production, Ministry of Energy and Mines, College of Engineers, College of Architects	√	√	√	√	Establish working groups to define criteria	Develop a technical standard for categorization and certification.	Disseminate with stakeholders for feedback	Implement feedback in the technical standard	Publicación de la norma	Published standard
T5	Establishment of affordable tools for the calculation and management of embodied carbon and consulting services	2028	Ministry of the Environment, Ministry of Urban Development and Housing, Ministry of Production, Ministry of	√	√	√		Establish and standardize measurement criteria	Training and certification for focal consultants and industry stakeholders.	Develop a measurement tool with standardized parameters	Implement benefits for industries that calculate and manage embodied carbon	Fomentar la creación de alianzas con universidades y organizaciones locales para ofrecer servicios de consultoría en la gestión de	Number of participating companies/Number of companies in the market
F	**Finance**	**When?**	**Who?**	**Energy Efficiency**	**Operational**	**Embodied**	**Resilience**	**MILESTONE & SUBGOAL 1**	**MILESTONE & SUBGOAL 2**	**MILESTONE & SUBGOAL 3**	**MILESTONE & SUBGOAL 4**	**MILESTONE & SUBGOAL 5**	**INDICATORS**
F1	Establish a financial model, with fiscal and non-fiscal incentives for zero-carbon and resilient projects in the construction sector	2050	Construction unions, financial sector, government, value chain representatives	√	√	√	√	Establish a Working Group on Sustainable Financing for Buildings and Construction and call for participants (Financial Committee)	Defining governance and developing an agenda for a financial model for sustainable construction	Development of the financial model and business case, taxonomies, etc.	Approval and launch of publications such as the local taxonomy and financial products for public and private projects	Disseminate the taxonomy to stakeholders	Number of construction projects eligible for tax and non-tax incentives/Total projects
F4	Guidelines for the verification and disclosure of climate risks to include in project economic models	2027	Construction unions, financial sector, decentralized autonomous governments, Ministry of the Environment, Ministry of Education, National Secretariat for Risk Management.				√	Identify local climate risks based on the project by 2027	Developing a practical guide for identifying and assessing climate risks	Organize training workshops for public and private sector stakeholders on the application of the guide.	Establish a collaborative network between universities, local governments, and NGOs to periodically update the guide	Implement an education program that informs project developers about the importance of considering climate risks	Percentage of economic projects incorporating climate risk assessments/Total registered projects
F2	Establishment of budget guidelines for zero-carbon and resilient construction projects	2026 (Urgent)	Asobanca, Ministry of Finance, unions, local government, national government	√	√	√	√	Conduct working groups, convened by the CEES and considering key sectors	Establishing qualification parameters for budget reclassification	Assume commitments and assign responsibilities.	Develop a baseline matrix for establishing budgets (construction, operation, maintenance, and end-of-construction). Lifecycle assessment	Conduct a cost-benefit analysis of different zero-carbon construction technologies and practices and publish a report to guide budgeting	Percentage of construction projects using budget guidelines/Total projects
F3	Linking energy efficiency, zero carbon and building resilience with ESG performance reporting frameworks and disclosure standards	2026	Technical roundtable between the Ministry of the Environment, Ministry of Energy and Mines, and Ministry of Production.	√	√	√	√	Develop a Manual for the application of ESG reporting frameworks	Promoting ESG capacity building	Define the scope of building management.	Develop a set of guidelines that integrate energy efficiency, zero-carbon, and resilience criteria into ESG reporting frameworks	Organize workshops and seminars to train architects and engineers on how to apply new criteria to their ESG reporting	Number of construction projects implementing integrated energy efficiency criteria in their ESG reports/Total reported projects
F5	Capacity building in technical-financial analysis with a project life cycle approach and best practices considering climate mitigation and adaptation	2026	Construction unions, financial sector, decentralized autonomous governments, Ministry of the Environment, Ministry of Education, National Secretariat for Risk Management, Ministry of Finance	√	√	√	√	Create a comprehensive training program for professionals covering aspects of technical and financial analysis with a life-cycle approach.	Generating synergies between private companies and academia to promote capacity building	Establish strategies for disseminating the training program.	Define the role of stakeholders in the dissemination of this work	Monitor the effectiveness and participation of the training program	Number of industry professionals trained

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D	Data	When?	Who?	Energy Efficiency	Operational	Embodied	Resilience	MILESTONE & SUBGOAL 1	MILESTONE & SUBGOAL 2	MILESTONE & SUBGOAL 3	MILESTONE & SUBGOAL 4	MILESTONE & SUBGOAL 5	INDICATORS
D1	Provide tools or databases for defining energy efficiency, embodied and operational carbon, and resilience goals for the construction sector	2026	Ministry of Urban Development and Housing, Ministry of Environment, Decentralized Autonomous Governments (GADs), INEC	√	√	√	√	Establishment of a Working Group (Technical Committee) to define the methodology and scope for determining the baseline.	Conduct studies to determine baselines: operational carbon, embodied carbon, and resilience	Defining decarbonization and resilience goals based on baseline results and aligned with global goals	Approval and publication of results	Create an open national repository of data and factors	Number of databases available and open to the public
D2	Provide measurement and benchmarking tools for efficient, zero-carbon buildings and resilient	2026	Ministry of Urban Development and Housing, Ministry of Production, Decentralized Autonomous Governments (GADs), INEC	√	√	√	√	Determine information by type: social housing, public services, etc., and establish a scaled baseline.	Adopting indicators (energy, water, waste, operational and embodied carbon, resilience) aligned with NTE INEN, NEC, and ISO 52000	Creating a program with 50 diverse buildings in Quito, Guayaquil, and Cuenca to measure consumption	Issuance of the NEC-HS-EE	Generate a public dashboard with performance percentiles by type and climate	Number of buildings that comply with the Ecuadorian Construction Standard 2070: Percentage of tons of CO2 removed
D4	Data transparency to promote leadership, favor comparability, management and trust in the dissemination of results	2027	Academy, Ministry of Environment, Undersecretariat of Climate Change	√	√	√		Collect information on the percentage of water, electricity, and natural resources used, as well as waste generated in construction projects.	Forming working groups to gather information	Training for local governments and the private sector on the importance of collecting consumption data	Monitoring the level of training participation	Form a technical committee to ensure data transparency	Percentage of organizations with public and verifiable data
D3	Digital solutions for measurement, monitoring, control and automation of buildings such as BIM modeling, AI, 5G, and big data	2030	Ministry of Urban Development and Housing, Ministry of Production, Decentralized Autonomous Governments (GADs), INEC	√	√	√		Generate a national emissions inventory and create a risk platform for the construction sector.	Including BIM modeling, AI, 5G, and big data as strategies in territorial planning and land use	Connecting with national suppliers	Conducting post-training monitoring	Provide express training for facility managers and national suppliers on operations	Percentage of buildings with digital solutions
D5	Capacity building in mechanisms and information technologies for measurement, registration, verification and reporting of emissions	2027	Academy, Ministry of Environment, Undersecretariat of Climate Change, Ministry of Education, Global Green Growth Institute (GGGI)	√	√	√		Partnership with academia to define relevant training topics on emissions measurement, recording, verification, and reporting.	Partnership with the Global Green Growth Institute (GGGI) for training on low-carbon emissions in the construction industry	Establishing a technical committee for monitoring	Promoting short training sessions for auditors (universities, chambers of commerce, and consultants)	Form a monthly technical panel (MAATE + academia + private sector).	Number of consultants trained
M	Mindset	When?	Who?	Energy Efficiency	Operational	Embodied	Resilience	MILESTONE & SUBGOAL 1	MILESTONE & SUBGOAL 2	MILESTONE & SUBGOAL 3	MILESTONE & SUBGOAL 4	MILESTONE & SUBGOAL 5	INDICATORS
M2	Establish a national working group on energy efficiency, zero carbon and resilience in buildings	2026	CEES, Ministry of Urban Development and Housing, Ministry of Production, Ministry of Environment, Academia, Protected Area Communities	√	√	√	√	Identify and convene experts and stakeholders to form a multidisciplinary team that integrates knowledge and experience in energy efficiency, zero-carbon, and resilience.	Establish clear objectives and a work plan for the team, such as preparing a national assessment of the current state of buildings in terms of energy efficiency and resilience.	Hold regular meetings to assess the team's progress.	Develop a digital platform to facilitate communication and collaboration among team members	Create an annual report summarizing activities, achievements, and recommendations.	Number of concrete initiatives proposed and/or implemented by the team
M4	Existence of a mechanism for capacity development in climate adaptation and resilience in buildings	2026	Ministry of Education, Ministry of Environment, Academia, youth organizations, NGOs, Decentralized Autonomous Governments, international organizations	√	√	√	√	Share the existing mechanism for capacity development in climate adaptation and resilience in buildings.	Communicate in high-attendance and industry-interesting venues, such as real estate fairs.	Share cost-benefit analysis and impact reduction among materials.	Expansion and dissemination to different public and private sectors	Strategic partnerships with international organizations to strengthen training on climate adaptation and resilience in buildings.	Percentage of training sessions with positive participation
M3	Existence of a mechanism for capacity development in energy efficiency and decarbonization in buildings	2026	Ministry of Education, Ministry of Environment, Academia, youth organizations, NGOs	√	√	√	√	Share the existing mechanism for capacity development in energy efficiency and decarbonization in buildings.	Design a participatory plan for students and thel public in general, between 20 and 30 years of age.	Develop training and technical modules and materials on energy efficiency and decarbonization in buildings.	Implementation and dissemination with stakeholder group(s)	Monitor plans and assess stakeholder perceptions.	Percentage of training sessions with positive participation
M1	Existence of a "public declaration of commitments" as a requirement to ensure transparency, access to financial and regulatory incentives for the public sector	2026	Ministry of Urban Development and Housing, Ministry of Production, Ministry of Environment, Academia	√	√	√	√	Share access to incentives for the public sector.	Generate financial or tax incentives for domestic product manufacturers.	Further disseminate the PECC (Zero Carbon Ecuador Program) to stakeholders.	Develop and formalize a standardized "public declaration of commitments" template that includes clear and specific criteria on sustainability, energy efficiency, and zero-carbon that public sector projects must meet.	Convene key stakeholders to disseminate the standardized "public declaration of commitments" model.	Number of participating companies