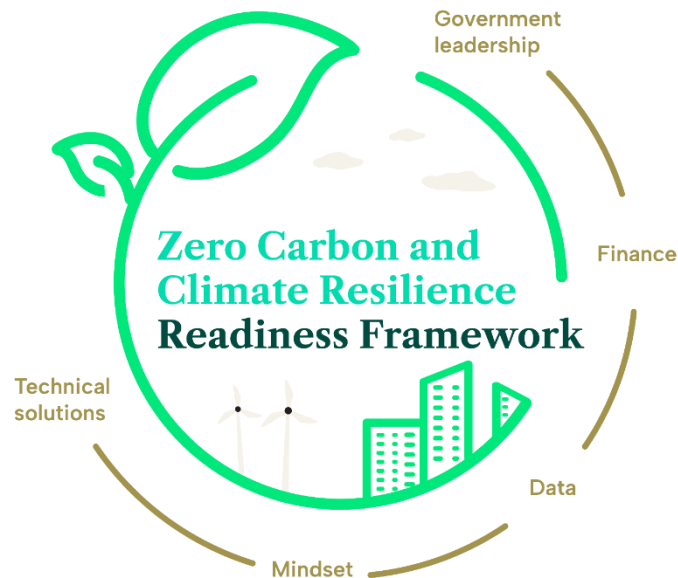




WORLD GREEN BUILDING COUNCIL

Europe Regional Network (ERN)



Workshop Results Analysis Report

Whole Life Carbon (WLC) & Climate Resilience

Validation Workshops for Enabling Actions

Greece

Sustainable Building Council Greece (SBC Greece)



IKEA Foundation

Laudes —
— Foundation

Workshop 1 (Multi-Stakeholder): 13 October 2025 – Athens Marriott Hotel
Workshop 2 (Government Leadership): 22 October, 6 November & 12 December 2025

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EXECUTIVE SUMMARY

This report presents the consolidated findings from Greece's Stage 3 ZCCRFF validation workshops, conducted by SBC Greece (October–December 2025) as part of the WorldGBC BuildingLife II Capacity Building Programme. The workshops validated the ZCCRFF survey results (May 2025) and defined enabling actions across all five pillars for Greece's national Whole Life Carbon (WLC) roadmap.

Key Findings at a Glance

Pillar	Top Opportunity	Critical Gap	Priority Enabling Action
Government Leadership	G2 - National Energy Efficiency Strategy	Fragmented inter-ministerial coordination on WLC	Establish permanent inter-ministerial WLC coordination body (G.EA6)
Technical Solutions	T4 - Renewable Energy Integration	T5 - No affordable embodied carbon calculation tools in Greek	National benchmarking framework aligned with EU Level(s) (T.EA1)
Finance	F1 - Financial Incentives Framework	No WLC-aligned financial product framework	National task force to design WLC financial framework (F.EA2)
Data	D1 - Tools & Databases	D2/D4 - KENAK excludes CO ₂ ; no data transparency	Extend KENAK to include WLC benchmarking (D.EA2)
Mindset	M3/M4 - Capacity Development	M2 - No national multi-stakeholder working group	SBC Greece Advisory Committee on WLC & Resilience (M.EA1)

Scope of Workshops

Two complementary workshop formats were employed to ensure comprehensive coverage of all five ZCCRFF pillars:

- Workshop 1 (13 October 2025, Athens Marriott Hotel): Full-day multi-stakeholder event with 50+ professionals from real estate, engineering, finance, academia, and industry associations; covered Technical Solutions, Data, Finance, and Mindset pillars using an Importance vs. Likelihood quadrant methodology.
- Workshop 2 (Oct–Dec 2025, Ministry of Environment and Energy - YPEN): Dedicated three-meeting Government Leadership series with ministry officials; covered strategies G1-G6 and produced SMART-goal-based enabling actions. Seven additional strategies (G7-G10, and D6, D7, M5) were introduced and validated based on ministry and stakeholder inputs.

Strategic Imperatives Identified

The workshops converged on five structural imperatives for Greece's WLC transition:

- Institutional Architecture: Establish a permanent, multi-level coordination body bridging YPEN, Ministry of Development, SBC Greece, industry, and academia.

- **Data Infrastructure:** Extend KENAK to include whole-life carbon (embodied + operational), launch a national open-access building carbon database, and introduce a Digital Building Passport aligned with EU standards.
- **EU Regulatory Alignment:** Accelerate transposition of EPBD recast, prepare for ETS2 extension to buildings (2027), align with CSRD, EU Taxonomy, and forthcoming National Climate Law obligations.
- **Financial Ecosystem:** Map EU and national instruments, convene a finance task force, develop ESG reporting templates for real estate, and link sustainability performance to fiscal incentives (ENFIA, insurance premiums).
- **Capacity Building:** Deploy a unified training programme via SBC Greece, TEE, and universities covering all five pillars simultaneously, targeting 1,000+ professionals by 2026.

Implementation Timeline Overview

Phase	2025 Q4	2026	2027	Key Milestones
Quick Wins	✓			SBC Advisory Committee (M.EA1); Finance Task Force (F.EA2); Inter-ministerial coordination (G.EA6)
Foundation		✓		KENAK extension (D.EA2); WLC benchmarking framework (T.EA1); Digital Building Passport (D6); Open-access database (D.EA3); CPD training (T.EA5, M.EA3)
Mainstreaming			✓	Mandatory WLC reporting (G.EA2); Climate resilience regulations (G.EA4); Level(s)-aligned certification (G.EA5); National Climate Law implementation (G7)

SBC Greece is well-positioned to serve as the national convening and coordinating body for this transition, with the Ministry of Environment and Energy (YPEN) committed as an institutional partner. The enabling actions matrix produced from these workshops provides a structured, time-bound, and measurable framework ready for integration into the ZCCRRF Regional Enabling Actions Matrix and Greece's National WLC Roadmap.

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1. Background and Justification

The global building and construction sector is responsible for approximately 37% of energy-related CO₂ emissions and over 34% of final energy demand worldwide. Addressing whole life carbon (WLC) - including both operational and embodied carbon – alongside climate resilience, is critical for meeting the objectives of the Paris Agreement and the European Green Deal.

In this context, the World Green Building Council (WorldGBC) has developed the Zero Carbon and Climate Resilience Readiness Framework (ZCCRRF), a diagnostic methodology designed to assess the readiness of national construction markets to advance towards decarbonisation and climate resilience in buildings. The ZCCRRF evaluates five strategic pillars: Government Leadership, Technical Solutions, Finance, Data, and Mindset.

Sustainable Building Council Greece (SBC Greece), as an Established Member of the WorldGBC European Regional Network (ERN), implemented the ZCCRRF diagnostic survey in Greece during the first half of 2025. The survey collected responses from stakeholders across the Greek building and construction value chain, providing a baseline assessment of the national readiness across all five pillars.

The survey results (finalised in May 2025) identified key opportunities and gaps for each pillar, establishing the foundation for the subsequent validation workshop phase. Notably, the Greek survey identified Technical Solutions (T4: Renewable Energy, T3: Energy Efficiency Technologies) and Finance (F1: Financial Incentives) as the top Key Actions (Opportunities), while Data tools (D1), Data transparency (D4), and the National Working Group (M2) were identified as the most critical Gaps (Challenges) requiring targeted intervention.

This report presents the analysis of results from the validation workshops conducted by SBC Greece in October–December 2025, representing Stage 3 of the ZCCRRF methodology for Greece.

2. Workshop Description and Context

The validation process for Greece was conducted through two complementary workshops, designed to ensure comprehensive coverage of all five ZCCRRF pillars while addressing the distinct dynamics of cross-sectoral stakeholder engagement and government institutional dialogue.

2.1 Workshop 1: Multi-Stakeholder Validation (13 October 2025)

First workshop was a full-day multi-stakeholder event bringing together representatives from the private sector, academia, financial institutions, and industry associations. It comprised a Panel Discussion on the national decarbonisation and resilience agenda, followed by four thematic working tables covering the Technical Solutions, Data, Finance, and Mindset pillars. In that workshop the Government Leadership pillar was not assessed, as no government stakeholders were present.

Parameter	Details
Date	13 October 2025
Location	Athens Marriott Hotel, Athens, Greece
Organised by	Sustainable Building Council Greece (SBC Greece)
In collaboration with	WorldGBC European Regional Network (ERN)
Format	Panel Discussion + 4 Thematic Working Tables
Working Tables	Technical Solutions, Data, Finance, Mindset
Participants	50+ professionals from across the building value chain
Sectors Represented	Private sector, Academia, Financial institutions, Consultants, Manufacturers, Real Estate Developers, Hospitality, Industry Associations

2.2 Workshop 2: Government Leadership Pillar (October–December 2025)

Given the critical importance of the Government Leadership pillar and the distinct institutional dynamics involved, a dedicated series of three targeted meetings was conducted with members of the Ministry of Environment and Energy (YPEN) who had participated in the ZCCRRF survey. This approach ensured in-depth, focused dialogue with the key governmental stakeholders responsible for building sector policy and regulation in Greece.

Meeting	Date	Focus
1st Meeting	22 October 2025	Presentation of ZCCRRF survey results for the Government Leadership pillar; validation of identified opportunities and gaps (G1–G6); initial discussion on enabling actions and policy priorities.
2nd Meeting	6 November 2025	Detailed working session on enabling actions for priority strategies (G1, G2, G3, G5); discussion of regulatory alignment with EU frameworks (EPBD recast, EU Taxonomy, National Energy and Climate Plan – NECP); mapping of existing national policy instruments.
3rd Meeting	12 December 2025	Finalisation of SMART goals, indicators, and timelines for the Government Leadership enabling actions; discussion on institutional coordination mechanisms and the role of YPEN in the national WLC roadmap; agreement on follow-up commitments.

This dedicated Government Leadership workshop series allowed for a depth of institutional engagement that would not have been feasible in the broader multi-stakeholder setting. The three-meeting structure enabled an iterative process of presentation, discussion, and validation consistent with the ZCCRRF methodology.

2.3 Participant Profile

Workshop 1 Participants

The multi-stakeholder workshop attracted over 50 professionals from a diverse range of organisations representing the entire building and construction value chain in Greece. Participants included representatives from major real estate developers, engineering and consulting firms, manufacturers and product suppliers, financial institutions, public utilities, construction companies, industry associations, hospitality, and academic institutions.

Workshop 2 Participants

The Government Leadership workshop series included officials and technical staff from the Ministry of Environment and Energy (YPEN), specifically from directorates responsible for energy efficiency in buildings, building regulations, and climate policy. These participants had previously completed the ZCCRRF survey and therefore had prior familiarity with the framework's pillars, strategies, and diagnostic approach.

3. Workshop Methodology

3.1 ZCCRRF Project Stages

The ZCCRRF methodology is structured in four sequential stages:

1. Initial meeting with GBCs and implementation of the diagnostic survey.
2. Analysis of survey results and dialogue/consensus workshops.
3. Validation workshops for the definition of enabling actions (this report).
4. Integration of the National and Regional Enabling Actions Matrix.

This report presents the results of Stage 3 for Greece, encompassing both the multi-stakeholder workshop (Workshop 1) and the dedicated Government Leadership workshop series (Workshop 2).

3.2 Workshop 1 Methodology (Multi-Stakeholder)

Workshop 1 employed a structured Importance vs. Likelihood matrix methodology at each working table. Each of the four tables (Technical Solutions, Data, Finance, Mindset) was assigned a coordinator who guided the discussion. Participants used a four-quadrant mapping approach:

- **Upper-Right (High Importance / High Likelihood):** Key Actions – Opportunities to pursue immediately.
- **Upper-Left (High Importance / Low Likelihood):** Gaps – Critical challenges requiring strategic intervention.
- **Lower-Right (Low Importance / High Likelihood):** Lower-priority actions with ease of implementation.
- **Lower-Left (Low Importance / Low Likelihood):** Low-priority items at this stage.

For each strategy within their assigned pillar, participants discussed enabling actions, placed them on the quadrant map, and documented detailed notes on proposed interventions, goals, and indicators.

3.3 Workshop 2 Methodology (Government Leadership)

The Government Leadership workshop series followed an iterative three-meeting format specifically designed for institutional engagement. The methodology proceeded as follows:

- **Meeting 1 – Validation:** Presentation of the ZCCRRF survey results for strategies G1–G6; validation of the importance and likelihood assessments; identification of

discrepancies between survey responses and institutional perspective; preliminary discussion of priority areas.

- **Meeting 2 – Enabling Actions Development:** Detailed working session focused on translating validated gaps and opportunities into concrete enabling actions; mapping of existing national policy instruments and EU regulatory requirements; identification of institutional responsibilities and coordination needs.
- **Meeting 3 – Finalisation:** Agreement on SMART goals, measurable indicators, and realistic timelines; discussion of inter-ministerial coordination mechanisms; commitment to follow-up actions and integration into the national WLC roadmap.

This three-meeting structure ensured that the Government Leadership enabling actions reflect both the survey data and the institutional reality of policymaking in Greece, resulting in actions that are both ambitious and implementable.

4. Analysis of Workshop Results by Pillar

This section presents the consolidated findings from each working table (Workshop 1) and from the Government Leadership meeting series (Workshop 2). The analysis synthesises the raw workshop outputs – including physical sticky notes, quadrant placements, handwritten notes, and meeting records – into structured enabling actions, goals, and indicators for each pillar.

4.1 Technical Solutions Pillar

The Technical Solutions table (Workshop 1) addressed strategies T1 through T7, focusing on the availability and adoption of technologies, methodologies, and design approaches for zero-carbon and climate-resilient buildings in Greece.

Quadrant Placement Summary

Strategy	Description	Quadrant	Priority
T1	Clear definition of zero-carbon and resilient buildings	High Importance / High Likelihood (Action)	Key Action
T3	Availability of energy efficiency technologies from design stage	High Importance / High Likelihood (Action)	Key Action
T4	Renewable energy integration in decarbonisation pathway	Medium Importance / High Likelihood (Action)	Opportunity
T5	Affordable methodologies for embodied carbon calculation	High Importance / Medium Likelihood (Gap-Action boundary)	Priority Gap
T6	Training in selection criteria for decarbonisation technologies	Medium Importance / Low Likelihood (Gap)	Gap
T7	Climate resilience strategies from project planning	Medium Importance / Medium Likelihood	Emerging Action

Key Workshop Findings – Technical Solutions

T1 – Definition and Benchmarking: Participants emphasised the urgent need for a nationally agreed definition of zero-carbon and climate-resilient buildings. They proposed the development of national benchmarking methodologies aligned with EU standards (e.g., Level(s) framework) for zero-carbon and resilient buildings. A clear taxonomy was deemed essential to align industry practice with regulatory expectations. Target timelines referenced were 2025–2028.

T3 – Energy Efficiency Technology Adoption: The table identified this as a high-priority action. Participants proposed awareness campaigns and technical incentives to promote the adoption of energy efficiency technologies (smart metering, building automation, high-efficiency HVAC systems, advanced building envelopes). The focus was on making these technologies accessible from the design stage, supported by national implementation guidelines and financial instruments.

T4 – Renewable Energy Integration: Participants identified incentives for RES (Renewable Energy Sources) adoption in buildings as a key enabler, including energy storage solutions and grid interconnection. This was placed as an opportunity due to Greece’s favourable renewable energy conditions, though regulatory barriers to building-integrated renewables were noted.

T5 – Embodied Carbon Methodologies: This strategy was identified as a critical gap requiring immediate attention. Greek market actors are beginning to work with international LCA tools in the absence of a national solution (see Section 6.7). Participants noted the need for pragmatic and affordable methodologies for calculating and managing embodied carbon, with references to the need for subsidised tools and training. The need for accessible consultant services was highlighted, with references to existing tools and standards (e.g., EN 15978, OneClick LCA) needing Greek-language localisation.

T6 – Technical Training: Investment in technical curriculum development was deemed necessary. Participants proposed integrating decarbonisation and climate resilience training into the existing CPD (Continuing Professional Development) framework of TEE (Technical Chamber of Greece). The timeline proposed was from 2026, with piloting in 2025.

T7 – Climate Resilience in Design: Workshop participants called for the systematic integration of climate resilience assessment into the building design process, linking it to existing Environmental Impact Assessment (EIA) processes and proposing mandatory climate resilience checklists for new construction permits.

4.2 Data Pillar

The Data table (Workshop 1) addressed strategies D1 through D7, focusing on the availability of tools, databases, digital solutions, transparency, and capacity for data-driven decarbonisation and resilience monitoring in Greece.

Quadrant Placement Summary

Strategy	Description	Quadrant	Priority
D1	Tools or databases for energy efficiency, embodied/operational carbon, and resilience goals	Medium-High Importance / Medium-High Likelihood (Action)	Key Action

Strategy	Description	Quadrant	Priority
D2	Measurement and benchmarking tools for zero-carbon buildings	Medium Importance / Low-Medium Likelihood (Gap boundary)	Critical Gap
D3	Digital solutions (BIM, AI, big data) for monitoring	Medium Importance / High Likelihood (Action)	Opportunity
D4	Data transparency for comparability and trust	High Importance / Low Likelihood (Gap)	Critical Gap
D5	Capacity building in IT mechanisms for MRV of emissions	Low-Medium Importance / Medium Likelihood	Emerging

Key Workshop Findings – Data

D1 – Tools and Databases: Participants proposed the development of a centralised mechanism for energy efficiency monitoring integrating data on energy consumption, embodied carbon, and climate resilience metrics. Actions discussed included establishing control mechanisms aligned with the Greek regulatory framework (KENAK – Regulation on Energy Performance of Buildings) and expanding them to include carbon accounting. The table also discussed the integration of existing data from building energy performance certificates (EPCs) into a national open-access database, with contributions from the private sector, municipalities, and academic institutions. Participants discussed the material information disclosure with the use of EPDs and the need for a database containing the relevant information as well as the inclusion of EPDs in the Building Permit Issuance process.

D2 – Measurement and Benchmarking Tools: This strategy was identified as a critical gap. This gap is particularly significant given that EPD-verified low-carbon materials are already commercially available in Greece (see Section 6.7). Participants specifically noted that the existing national tool (KENAK) does not account for CO₂ emissions, and that no standardised tool currently exists in Greece for measuring whole-life carbon emissions of buildings. The table proposed that the development of such a tool be a priority action, potentially building on the KENAK platform but significantly extending its scope to include embodied and operational carbon benchmarks.

D3 – Digital Solutions: The working table recognised BIM modelling, AI, and data analytics as high-likelihood opportunities. Actions discussed included promoting digital twins for buildings, integrating carbon tracking modules into existing BIM workflows, and leveraging smart building data for automated carbon reporting. Participants noted that while the technology exists, uptake in the Greek market is limited by lack of mandates and technical capacity.

D4 – Data Transparency: This was placed as a critical gap (high importance, low likelihood). Participants highlighted the absence of publicly accessible databases for comparing building performance across the Greek market. The lack of transparency was seen as a barrier to investor confidence, green lending, and benchmarking against European peers. The table recommended establishing a national data transparency framework for building carbon performance, linked to ESG reporting obligations.

D5 – Capacity Building in IT and MRV: Participants noted the need for training programmes for building professionals in data management, carbon MRV (Measurement, Reporting, and

Verification) systems, and digital tools. This was considered important but of lower immediate priority than establishing the tools and databases themselves.

D6¹ – Digital building Passport: The expansion of the Electronic Building Identity into a comprehensive Digital Building Passport, aligned with contemporary European digital passport standards, constitutes a necessary step for the strategic transformation of the national building stock. Such a tool would consolidate all critical building data-energy performance, materials, carbon footprint, technical specifications, lifecycle information, and renovation history, into a unified, interoperable, and continuously updated digital platform, thereby enhancing transparency, access to financing, and evidence-based decision-making. At the same time, it would facilitate alignment with European policies on green transition and circular economy, support the attraction of investments, and serve as a key pillar for the planning, monitoring, and acceleration of energy and environmental upgrades across the country’s building sector.

D7¹ – Digital Bank of Materials and Construction Details: The establishment of a Digital Bank of Materials and Construction Details constitutes a critical infrastructure for the systematic upgrading of quality and sustainability in the building sector. This platform would compile structured and verifiable data on construction materials and technical solutions, with particular emphasis on characteristics related to energy performance (thermal insulation capacity, airtightness, thermal bridge mitigation), environmental performance (embodied energy, recyclability and reusability, environmental product declarations), and life-cycle carbon footprint. Through interoperability with design and assessment tools, the Digital Bank would support evidence-based design choices, enhance transparency in the construction products market, and act as a catalyst for accelerating decarbonization and the transition toward circular construction practices.

4.3 Finance Pillar

The Finance table (Workshop 1) addressed strategies F1 through F5, focusing on financial models, incentives, ESG linkages, climate risk disclosure, and capacity building for green finance in the Greek construction sector.

Quadrant Placement Summary

Strategy	Description	Quadrant	Priority
F1	Financial model with fiscal and non-fiscal incentives for zero-carbon projects	High Importance / Medium-High Likelihood (Action)	Top Priority
F2	Budget guidelines for zero-carbon construction projects	Medium Importance / Medium Likelihood	Moderate
F3	Linking energy efficiency and carbon with ESG reporting	Medium-High Importance / Medium Likelihood	Key Action
F4	Guidelines for climate risk disclosure in economic models	Medium Importance / Medium-High Likelihood	Opportunity

¹ Actions were contributed by Ministry as supplementary enabling actions complementing the workshop quadrant analysis

Strategy	Description	Quadrant	Priority
F5	Capacity building in technical-financial analysis with lifecycle approach	Medium Importance / Medium Likelihood	Emerging

Key Workshop Findings – Finance

F1 – Financial Incentives Framework: This was the highest-ranked strategy in the Finance pillar. Workshop participants proposed the establishment of a national financial framework combining fiscal incentives (tax reductions, reduced property taxes, insurance premium discounts) and non-fiscal incentives (expedited permitting, density bonuses) for zero-carbon and climate-resilient building projects. The table discussed the need to map existing financial instruments (EU funds, national subsidies, green bonds) and align them with WLC objectives. A task force comprising ministries, banks, and private investors was proposed, with pilot projects targeted for implementation.

F2 – Budget Guidelines: Participants discussed the creation of standardised budget guidelines that integrate carbon costs into project financial models. This included establishing green procurement criteria for public tenders and aligning with EU Taxonomy requirements. The development of cost-benefit analysis templates incorporating lifecycle carbon costs was proposed.

F3 – ESG Integration: The table recognised the urgency of linking building energy efficiency and carbon performance with ESG reporting frameworks, particularly given the implementation of the Corporate Sustainability Reporting Directive (CSRD) and EU Taxonomy in Greece. Participants discussed the creation of standardised ESG reporting templates for the real estate sector, integrating WLC metrics.

F4 – Climate Risk Disclosure: Workshop participants proposed the development of guidelines for incorporating climate risk assessment into project economic models, aligned with TCFD (Task Force on Climate-related Financial Disclosures) recommendations and the European Sustainability Reporting Standards (ESRS).

F5 – Lifecycle Financial Analysis Capacity: The table recommended capacity building programmes for financial professionals and project developers in lifecycle cost analysis, carbon pricing integration, and climate risk quantification. Partnerships with academic institutions and professional bodies were proposed.

4.4 Mindset Pillar

The Mindset table (Workshop 1) addressed strategies M1 through M5, focusing on public commitments, national working groups, capacity development, and broader awareness and mindset shift across the Greek building sector. This table produced the most extensive handwritten notes (4 pages), reflecting deep and substantive discussions.

Quadrant Placement Summary

Strategy	Description	Quadrant	Priority
M1	Public declaration of commitments for transparency and incentive access	Medium Importance / Low Likelihood (Gap)	Structural Gap
M2	National working group on energy efficiency, zero carbon, and resilience	High Importance / Low-Medium Likelihood (Gap)	Critical Gap

Strategy	Description	Quadrant	Priority
M3	Mechanism for capacity development in energy efficiency and decarbonisation	Medium Importance / Medium Likelihood	Moderate
M4	Mechanism for capacity development in climate adaptation and resilience	Medium Importance / Medium Likelihood	Moderate
M5	Targeted incentives for entire buildings or multi-owner buildings	High importance / Medium Likelihood	Strategic Priority

Key Workshop Findings – Mindset

M2 – National Working Group: Participants identified the formation of a national multi-stakeholder working group as the single most important mindset-related enabling action. The discussion centred on the collaboration between institutional bodies (e.g., TEE – Technical Chamber of Greece) and sector-specific organisations (e.g., SBC Greece). It was acknowledged that while such collaboration with a national body would be highly beneficial, the probability is currently constrained because institutional obligations do not always align with market-driven requirements. The table proposed that SBC Greece take a leading role in forming an advisory committee on WLC and Resilience that would interact with and bridge the gap between academic experts and market practitioners. This committee would serve as a special-purpose body connecting specialised scientists (e.g., university researchers) with consultants and industry professionals.

M1 – Public Commitments and Incentives: Incentives for voluntary adoption of sustainability commitments were discussed extensively. Participants noted that the integration of lifecycle operating costs into property assessment could serve as a powerful incentive mechanism, but this requires supportive policy frameworks. Specific fiscal instruments mentioned included linking sustainability performance to property tax (ENFIA) reductions, insurance premium adjustments, and ESG-linked financing. The concept of a national certification system (referencing the former “AEIFOROS” system) was discussed, with participants noting that creating a robust certification system requires significant resources (both human and financial) and should be positioned as a long-term priority action.

M3/M4 – Capacity Development: The table emphasised that broader awareness-raising and mindset change will primarily be achieved through comprehensive professional education and training. It was agreed that the most effective collaboration mechanism is the partnership between SBC Greece and existing professional chambers, academic institutions, and private sector entities. Key enabling actions identified included: development of CPD training modules on WLC and resilience, partnerships with universities and TEE for delivery, creation of a sustainability awareness conference and communication programme, and integration of sustainability actions into a broader action plan. The communication strategy was highlighted as essential – participants stressed that conferences, publications, and media exposure should be systematic components of the overall action plan, not ad-hoc initiatives.

M5 - Targeted incentives for entire buildings or multi-owner building: The introduction of targeted incentives for entire buildings or multi-owner building complexes is a key prerequisite for accelerating energy renovation and decarbonization of the building stock. Given the institutional, financial, and organizational challenges typically arising in multi-ownership schemes, tailored financial instruments, tax incentives, cost- and benefit-sharing mechanisms, as well as technical and administrative support for collective decision-making are required. Enhanced support for holistic interventions at the building or block level, combined with the

promotion of energy communities and shared management schemes, can generate economies of scale, achieve higher energy performance outcomes, and deliver substantial emission reductions, thereby contributing decisively to the sustainable upgrading of the urban environment.

4.5 Government Leadership Pillar

The Government Leadership pillar was addressed through the dedicated Workshop 2 series of three meetings (22 October, 6 November, and 12 December 2025) with officials and technical staff from the Ministry of Environment and Energy (YPEN). This section presents the consolidated findings across all three meetings.

ZCCRRF Survey Baseline – Government Leadership

The ZCCRRF survey results (May 2025) for the Government Leadership pillar in Greece showed the following ranking by combined Importance + Likelihood score: G2 (National Energy Efficiency Strategy) ranked highest, followed by G1 (Mandatory Zero-Carbon Regulations), G3 (National Decarbonisation Policy), G5 (National Climate Resilience Policy), G4 (Regulations Aligned with Zero-Carbon Certification), and G6 (Local Carbon Market Access) ranked lowest. In the Importance vs. Likelihood scatter analysis, all Government Leadership strategies fell within the upper portion of the chart, confirming high perceived importance, but with moderate to low likelihood scores, indicating significant implementation challenges.

Workshop 2 Validation and Discussion Outcomes

G1 – Mandatory Zero-Carbon Regulations: Ministry participants confirmed that while the EU regulatory framework (EPBD recast) provides a clear trajectory towards zero-emission buildings by 2030, the national transposition process is still underway. The discussion identified the need for a phased approach: starting with strengthened minimum energy performance requirements in the short term, progressing to mandatory WLC reporting requirements in the medium term, and full zero-carbon building standards in the longer term. YPEN officials noted the challenge of balancing regulatory ambition with market readiness and the need for accompanying technical support and capacity building for compliance.

G2 – National Energy Efficiency Strategy: This was validated as the highest-priority government strategy, consistent with the survey results. Ministry participants highlighted the existing National Energy and Climate Plan (NECP) and the Long-Term Renovation Strategy (LTRS) as the primary policy instruments. The discussion focused on the need to expand these instruments beyond operational energy to encompass whole life carbon, including embodied carbon from construction materials and processes. Participants agreed on the importance of updating the NECP to explicitly incorporate WLC targets and monitoring mechanisms for the building sector.

G3 – National Decarbonisation Policy for Construction: Ministry officials acknowledged that while Greece has a national decarbonisation strategy, it does not yet specifically address the construction sector's value chain in sufficient detail. The discussion focused on developing a sector-specific decarbonisation strategy that covers not only building operation but also material production, construction processes, and end-of-life management. The need for coordination between YPEN and the Ministry of Development was highlighted, as industrial policy for construction materials falls under a different ministerial mandate.

G4 – Alignment with Zero-Carbon Certification: Participants discussed the regulatory landscape for green building certification in Greece and the need to create a regulatory framework that recognises and incentivises certified zero-carbon buildings. The discussion referenced the European framework for sustainability assessment of buildings and the potential for integrating Level(s) indicators into the Greek building code. This was identified as a medium-term priority requiring inter-ministerial coordination.

G5 – National Climate Resilience Policy: This strategy generated significant discussion across all three meetings. Ministry participants acknowledged that climate resilience for buildings is an emerging policy area in Greece, particularly relevant given the increasing frequency of extreme weather events (wildfires, heatwaves, flooding). The discussion focused on integrating climate resilience requirements into building regulations, including updated design standards for thermal comfort, flood protection, and fire resilience. The need for climate risk mapping at the building level was identified as a foundational data requirement.

G6 – Local Carbon Market: This was confirmed as the lowest-priority strategy in the current Greek context, consistent with the survey results. While the EU Emissions Trading System (ETS) covers certain sectors, the extension of carbon pricing to buildings (via the ETS2 from 2027) was discussed as an emerging regulatory development. Ministry participants noted that Greece’s readiness for building-level carbon market mechanisms is limited by the lack of MRV infrastructure (linking to D2 and D5 findings from Workshop 1).

G7¹ - National Climate Law: Compliance with the commitments set out in the National Climate Law and the implementation of the objectives stemming from the European Green Deal make it imperative to accelerate energy renovation and decarbonization in the building sector. This institutional framework calls for a substantial reduction in greenhouse gas emissions, the achievement of climate neutrality, and improved energy performance by 2050, with binding intermediate targets. In this context, the transformation of the national building stock through comprehensive interventions, digital monitoring tools, and targeted incentives is not merely a development priority but a statutory obligation. Aligning national policies with European green transition strategies enhances international credibility, facilitates access to funding instruments, and ensures a coherent pathway toward a climate-neutral and energy-efficient built environment.

G8¹ - Systematic training and adequate staffing of the public administration bodies: The successful implementation of energy renovation and decarbonization targets in the building sector requires systematic training and adequate staffing of the public administration bodies involved in building permitting, public works planning and delivery, public procurement procedures, approval of design studies, and architectural competitions. Strengthening expertise in areas such as energy performance, sustainable materials, life-cycle assessment, digital tools (including BIM and digital building passports), and European regulatory requirements is essential to ensure high-quality, transparent, and technically sound decision-making. At the same time, the establishment of specialized units and continuous professional development of public officials will enhance administrative capacity, reduce delays, and ensure that public investments set a benchmark for sustainable and climate-neutral construction practices.

¹ Actions were contributed by Ministry as supplementary enabling actions complementing the workshop quadrant analysis

G9¹ – National Strategy for the construction materials and products industry: The transition of the building sector toward high energy performance and climate neutrality requires the active transformation of the construction materials and products industry. Companies in the construction value chain are called upon to invest in innovation, develop low-carbon products, reduce embodied energy, and adopt circular economy principles such as recyclability, reusability, and eco-design. At the same time, systematic documentation of environmental performance through Environmental Product Declarations (EPDs) and integration with digital platforms, such as digital building passports and material banks, enhance transparency and market competitiveness. Supporting the industry through targeted incentives, research programs, and green public procurement mechanisms can accelerate the decarbonization of the supply chain and position the construction sector as a driver of sustainable industrial development.

G10¹ - National digital database of materials: The establishment of a national digital database of new sustainable materials and materials recovered from demolitions and renovations for reuse constitutes a key infrastructure for transitioning the construction sector toward circular and low-carbon models. This database would document qualitative and quantitative characteristics, technical specifications, environmental performance, availability, and geographic origin of materials, ensuring traceability, reliability, and compliance with applicable standards. Through interoperability with digital building passports, BIM systems, and public procurement platforms, it would facilitate the integration of secondary and innovative materials into design and construction processes, reducing the consumption of primary resources and the carbon footprint of projects. The structured recovery and reuse of materials from demolitions and renovations would strengthen the domestic market, create new value chains, and substantially contribute to the decarbonization and sustainable upgrading of the building stock.

Government Leadership – Institutional Coordination

A cross-cutting theme across all three meetings was the need for stronger inter-ministerial and institutional coordination on WLC and climate resilience for buildings. Participants identified the following coordination challenges: fragmentation of building policy responsibilities across YPEN, the Ministry of Development, and the Ministry of Infrastructure; limited technical capacity within government agencies for WLC assessment; the need for a permanent inter-ministerial working group or coordination mechanism for building decarbonisation. Ministry participants expressed willingness to participate in and support the formation of a national WLC coordination platform, recognising SBC Greece’s role as a potential convening and technical support partner.

5. Consolidated Enabling Actions Matrix

The following matrices consolidate the validated enabling actions from all five pillars – four from Workshop 1 (Technical Solutions, Data, Finance, Mindset) and one from Workshop 2 (Government Leadership) – into a structured framework of Enabling Actions, timelines, and

¹ Actions were contributed by Ministry as supplementary enabling actions complementing the workshop quadrant analysis

indicators. This matrix is designed to feed directly into the National and Regional Enabling Actions Matrix of the ZCCRRF.

Technical Solutions Pillar – Enabling Actions

Ref	Enabling Action	Timeline	Status	Indicator
T.EA1	Develop national definition and benchmarking framework for zero-carbon and resilient buildings, aligned with EU Level(s)	Q2 2026	Planned	Framework document published (Yes/No)
T.EA2	Develop national guidelines for integrating RES and energy efficiency technologies from design stage	Q3 2025 – Q2 2026	In Progress	Guidelines published; No. of consultations held
T.EA3	Launch awareness campaign and incentive scheme for EE technology adoption in new buildings	Q1 2026	Planned	Campaign launched; No. of buildings adopting EE tech
T.EA4	Develop accessible Greek-language embodied carbon calculation tools and training	2026–2027	Planned	Tool launched; No. of professionals trained
T.EA5	Integrate WLC and resilience modules into TEE CPD curriculum	Q4 2025 (pilot) – 2026 (rollout)	In Progress	No. of CPD modules; No. of professionals trained
T.EA6	Establish mandatory climate resilience checklist for new construction permits	2027	Planned	Regulation adopted (Yes/No); % of new permits with checklist

Data Pillar – Enabling Actions

Ref	Enabling Action	Timeline	Status	Indicator
D.EA1	Map existing national data sources for building energy, carbon, and resilience metrics	Q3 2025 – Q1 2026	In Progress	Mapping report completed (Yes/No)
D.EA2	Extend KENAK platform to include WLC (embodied + operational carbon) benchmarking	2026–2027	Planned	Platform upgrade launched (Yes/No)
D.EA3	Establish national open-access database for building carbon performance	2026	Planned	Database live (Yes/No); No. of data entries
D.EA4	Develop national data transparency framework linked to ESG reporting	Q2 2026	Planned	Framework document published
D.EA5	Promote BIM-integrated carbon tracking and digital twin adoption through pilot projects	2026 – 2027	Planned	No. of pilot projects; Digital tools adopted
D.EA6	Launch training programme for building professionals on carbon MRV and digital tools	Q1 2026	Planned	No. of professionals trained
D.EA7	Develop and implement a Digital Building Passport aligned with EU standards, consolidating energy performance, embodied carbon, materials data, and lifecycle information for each building	2026-2027	Planned	Passport system launched / No. of building registered
D.EA8	Establish a Digital Bank of Materials and Construction Details with EPD integration, compiling technical, environmental, and	2027	Planned	Platform operational / No of material entries

Ref	Enabling Action	Timeline	Status	Indicator
	performance data for construction products and recovered materials			

Finance Pillar – Enabling Actions

Ref	Enabling Action	Timeline	Status	Indicator
F.EA1	Map existing financial instruments (EU funds, subsidies, green bonds) and align with WLC objectives	Q3 2025	In Progress	Mapping completed; No. of instruments identified
F.EA2	Convene national task force (ministries, banks, investors) to design WLC financial framework	Q4 2025	In Progress	Task force established (Yes/No)
F.EA3	Pilot 3+ demonstration projects financed under new WLC-aligned framework	Q2 2026	Planned	No. of pilot projects launched
F.EA4	Develop standardised ESG reporting templates for real estate sector integrating WLC metrics	Q2 2026	Planned	Templates published; No. of companies adopting
F.EA5	Develop climate risk disclosure guidelines aligned with TCFD and ESRS	2026	Planned	Guidelines published
F.EA6	Launch capacity building programme on lifecycle cost analysis and carbon pricing for financial professionals	2026	Planned	No. of professionals trained; Programme launched (Yes/No)

Mindset Pillar – Enabling Actions

Ref	Enabling Action	Timeline	Status	Indicator
M.EA1	Form SBC Greece Advisory Committee on WLC and Resilience (bridging academia, industry, and institutions)	Q3 2025	In Progress	Committee established (Yes/No); No. of members
M.EA2	Establish partnership framework with TEE, universities, and professional chambers for WLC training delivery	Q4 2025	In Progress	MoUs signed; No. of partner institutions
M.EA3	Develop and deliver CPD training modules on WLC and climate resilience	Q4 2025 module – 2026 delivery	In Progress	No. of modules developed; No. of professionals trained
M.EA4	Launch national sustainability awareness conference and communication programme	Q1 2026 ongoing	Planned	No. of events; Media reach metrics
M.EA5	Advocate for linking sustainability performance to ENFIA tax, insurance, and ESG-linked financing incentives	2026–2027	Planned	Policy proposals submitted; Regulatory changes adopted
M.EA6	Develop national WLC certification pathway building on existing frameworks	2027+	Planned	Certification framework published; No. of certified buildings
M.EA7	Design and implement targeted financial instruments, tax incentives, and cost- and benefit-sharing mechanisms for collective	2026–2027	Planned	Incentive scheme launched (Yes/No); No. of multi-owner

Ref	Enabling Action	Timeline	Status	Indicator
	renovation of entire buildings and multi-owner building complexes, promoting energy communities and shared investment models			buildings participating

Government Leadership Pillar – Enabling Actions

Ref	Enabling Action	Timeline	Status	Indicator
G.EA1	Update NECP and LTRS to explicitly incorporate WLC targets and monitoring for the building sector	2026–2027	Planned	Updated NECP/LTRS published with WLC provisions (Yes/No)
G.EA2	Develop phased regulatory roadmap for mandatory WLC reporting in new buildings (aligned with EPBD recast)	Q2 2026 roadmap – 2028 implementation	Planned	Roadmap published (Yes/No); Regulation adopted (Yes/No)
G.EA3	Develop sector-specific decarbonisation strategy covering construction value chain (materials, processes, end-of-life)	2026–2027	Planned	Strategy document published; Inter-ministerial agreement (Yes/No)
G.EA4	Integrate climate resilience requirements into building regulations (thermal comfort, flood, fire standards)	2027	Planned	Regulation amendments adopted; No. of updated standards
G.EA5	Create regulatory framework recognising and incentivising certified zero-carbon buildings (aligned with Level(s))	2027–2028	Planned	Framework published; No. of certified buildings under new framework
G.EA6	Establish permanent inter-ministerial coordination mechanism for building decarbonisation and resilience	Q4 2025 – Q1 2026	In Progress	Coordination body established (Yes/No); No. of meetings held annually
G.EA7	Develop national climate risk mapping at building level as foundation for resilience policy	2026–2027	Planned	Risk mapping completed for priority areas (Yes/No); Coverage (% of territory)
G.EA8	Prepare national readiness assessment for ETS2 extension to buildings (from 2027)	2027+	Planned	Assessment report published; MRV gaps identified
G.EA9	Align national building sector policies with National Climate Law binding targets and EU Green Deal commitments, developing a sector-specific implementation roadmap with intermediate milestones toward 2050 climate neutrality	2026–2027	Planned	Policy alignment report published (Yes/No); No. of building sector policies updated

Ref	Enabling Action	Timeline	Status	Indicator
G.EA10	Establish specialised units and CPD programmes within public administration bodies (permitting, public procurement, building inspection) covering WLC assessment, BIM, EU regulatory requirements, and digital tools	2026-2027	Planned	Specialised units established (Yes/No); No. of public officials trained
G.EA11	Develop a national strategy for the construction materials and products industry focused on low-carbon production, EPD adoption, circular economy principles, and alignment with EU Construction Products Regulation	2027	Planned	Strategy published (Yes/No); No. of companies adopting EPDs
G.EA12	Establish a national digital database documenting technical specifications, environmental performance data, and EPDs for new sustainable materials and recovered/reused construction materials, interoperable with BIM systems and Digital Building Passports	2027-2028	Planned	Database operational / No. of material entries

6. Cross-Pillar Synthesis and Key Themes

The combined results from Workshop 1 and Workshop 2 revealed several cross-cutting themes that span multiple pillars and require integrated approaches:

6.1 Institutional Coordination as the Foundation

Across all five pillars, the need for stronger institutional coordination emerged as the most consistent theme. The formation of a national multi-stakeholder working group (M2), the convening of a financial task force (F.EA2), the establishment of an SBC Greece Advisory Committee (M.EA1), and the creation of a permanent inter-ministerial coordination mechanism (G.EA6) all point to the same structural need: a multi-level coordinating architecture that bridges the gap between policy, industry, finance, and academia. The Government Leadership workshop series confirmed the Ministry's willingness to participate in such a structure, with SBC Greece serving as the convening partner.

6.2 Data Infrastructure as an Enabler

The Data pillar results directly support and enable progress in all other pillars. Without reliable tools for measuring whole-life carbon (D2), without data transparency (D4), and without a national database (D.EA3), neither the Technical Solutions pillar (which needs benchmarks and definitions) nor the Finance pillar (which needs ESG-compatible data for green lending) nor the Government Leadership pillar (which needs monitoring data for regulatory compliance) can achieve their objectives. The critical gap identified in D2 – that the Greek KENAK system currently does not account for CO₂ emissions – represents the single most important infrastructure gap to address. The Government Leadership workshop confirmed that extending KENAK to WLC is a recognised priority within YPEN. D6 (Digital Building Passport) and D7 (Digital Bank of Materials) were identified by YPEN as critical complementary data infrastructure tools, reinforcing the cross-pillar importance of digital data systems.

6.3 Education and Training as a Cross-Pillar Enabler

Every pillar identified capacity building as a necessary condition for progress. The Technical Solutions table called for CPD integration at TEE; the Data table called for professional training on MRV and digital tools; the Finance table called for lifecycle cost analysis training; the Mindset table called for a comprehensive training and awareness programme; and the Government Leadership series identified the need for technical capacity building within government agencies. This convergence suggests that a unified national capacity building programme, coordinated by SBC Greece with partners, could serve all five pillars simultaneously.

6.4 EU Regulatory Alignment as a Driver

The Government Leadership workshop series brought particular clarity to the role of EU regulatory frameworks as drivers for national action. The EPBD recast, CSRD, EU Taxonomy, and the forthcoming ETS2 extension to buildings all create concrete compliance obligations for Greece. Workshop 2 participants confirmed that these EU requirements provide both the mandate and the timeline for national action on WLC and climate resilience. The enabling actions matrix reflects this alignment, with several actions explicitly tied to EU transposition deadlines.

6.5 Validation of ZCCRRF Survey Results

Both workshops broadly validated the ZCCRRF survey results from May 2025. The survey's identification of T4 (Renewable Energy), T3 (Energy Efficiency Technologies), and F1 (Financial Incentives) as the top Key Actions was confirmed by Workshop 1 working tables. The survey's identification of D1 (Tools/Databases), D4 (Data Transparency), and M2 (National Working Group) as critical Gaps was reinforced through Workshop 1 discussions. Workshop 2 confirmed that G2 (National Energy Efficiency Strategy) is the highest-priority government strategy, and that G6 (Local Carbon Market) remains the lowest priority in the current Greek context. Both workshops added depth to the survey findings by specifying concrete enabling actions, timelines, and indicators.

6.6 Supply Chain Transformation and Public Sector Capacity as Systemic Prerequisites

The enabling actions contributed by the Ministry during the Government Leadership workshop series introduce a structural dimension that extends beyond regulatory compliance into the systemic transformation of both the construction supply chain and the public administration apparatus. G9 (National Strategy for the Construction Materials and Products Industry) and G10 (National Digital Database of Materials) collectively signal that decarbonisation of the building sector cannot be achieved through demand-side interventions alone, it requires a parallel transformation of the materials supply chain, underpinned by Environmental Product Declarations (EPDs), circular economy principles, and digital traceability infrastructure. At the same time, G8 (Systematic Training and Staffing of Public Administration Bodies) addresses a frequently overlooked bottleneck: the technical capacity of the public sector itself to implement, evaluate, and enforce the policies being developed. Without adequately trained public officials in building permitting, procurement, and design approval, even well-designed regulatory frameworks risk inconsistent application. G7 (National Climate Law) provides the overarching statutory mandate that transforms all of the above from voluntary ambitions into binding national obligations with defined timelines. Together, these four actions define a second-order enabling layer, one that conditions the effectiveness of all other pillar actions

and reinforce the case for positioning Greece's WLC implementation strategy not merely as a sector policy but as a cross-governmental institutional reform agenda.

6.7 Greek Market Evidence: Early Movers and Current Gaps

The workshop findings are corroborated by emerging market evidence from within Greece, confirming that supply-side readiness and voluntary leadership exist in the absence of regulatory mandates — and that the primary barrier to systematic adoption is the lack of national benchmarking infrastructure, not market willingness.

Lighthouse Projects

The most significant Greek example of low-carbon material specification at scale is The Ellinikon urban regeneration project (Lamda Development, Athens), Europe's largest urban regeneration project at 6.2 million m². Over 300,000 m³ of EPD-verified ECOPact low-carbon concrete has been deployed, achieving at least 30% reduction in embodied carbon versus standard concrete. The world's first EPD-certified ready-mix plant was constructed on-site, with integrated concrete waste recycling. Greece's first LEED Gold pre-certified residential building — the Riviera Tower, designed by Foster + Partners - is being delivered within this development. This project demonstrates that large-scale low-carbon material specification, EPD-backed supply chain management, and green certification are operationally achievable in the Greek construction context.

At the developer level, DIMAND S.A. has systematically integrated Life Cycle Assessment across a diverse portfolio of LEED Gold certified assets in Athens, covering office, hospitality, and mixed-use typologies. At the office development level, ICON GROUP's new headquarters in Athens is among the first Greek projects to voluntarily pursue DGNB certification - a European standard that mandates Life Cycle Assessment of embodied and operational carbon as a core criterion, making it one of the first Greek office projects where whole life carbon is being formally assessed through a third-party verified process². These examples confirm that voluntary adoption of lifecycle thinking is occurring across multiple segments of the Greek development market.

Low-Carbon Materials Supply

On the materials supply side, two major Greek manufacturers have already published full Environmental Product Declaration suites. Titan Cement became in 2022 the first Greek building materials company to publish EPDs for its entire product range - cement, mortars, aggregates, and concrete - calculated per ISO 14040 and EN 15804. Heracles Group (Holcim Greece) was the first cement company in Greece to obtain EPDs and commercially offers ECOPact low-carbon concrete, already deployed at scale at The Ellinikon. This supply-side readiness means that the verified embodied carbon data required for WLC assessment is increasingly available for Greek construction projects, a critical prerequisite that is often the first barrier in other markets.

The Remaining Gap - Tools and Benchmarks

² Disclosure: ICON GROUP's CEO is co-represented in this report's authorship. This project is cited on merit as a relevant market example.

Despite this emerging market leadership, the absence of a Greek-language WLC assessment tool and the exclusion of embodied carbon from the KENAK platform mean that whole life carbon cannot be systematically calculated, reported, or compared across Greek buildings. International tools such as OneClick LCA are available to specialist practitioners, but lack Greek-language interfaces and present cost and knowledge barriers for the broader market. No Greek developer has yet published a verified whole-life carbon figure for a completed building covering all lifecycle stages. This gap, between supply-side readiness and assessment infrastructure, defines the precise intervention point for enabling actions D.EA2 (KENAK extension), T.EA4 (Greek-language tool development), and D.EA3 (national open-access database), and confirms that the enabling actions identified in this report address real and present market constraints rather than hypothetical future needs.

7. Conclusions and Next Steps

7.1 Conclusions

The two-phase validation workshop process – comprising the multi-stakeholder Workshop 1 and the dedicated Government Leadership Workshop 2 – successfully achieved its primary objectives of validating the ZCCRRF survey findings and defining enabling actions for all five pillars of the Greek WLC roadmap. The key conclusions are:

1. Greece has significant opportunities in renewable energy integration and energy efficiency technology adoption, confirmed as the highest-priority Key Actions across both the survey and Workshop 1.
2. The most critical gaps requiring immediate intervention are: the absence of a national WLC measurement tool (extending KENAK), the lack of data transparency infrastructure, and the need for a national multi-stakeholder coordination mechanism.
3. Financial incentives, including fiscal tools (ENFIA linkage, insurance discounts) and non-fiscal tools (expedited permitting, density bonuses), are essential to catalyse market transformation.
4. A unified national capacity building programme, coordinated by SBC Greece in partnership with TEE, universities, and professional bodies, can address training needs across all five pillars simultaneously.
5. The Government Leadership workshop series confirmed the Ministry of Environment and Energy's recognition of WLC as a priority policy area and its willingness to engage in national coordination structures with SBC Greece as a technical partner.
6. EU regulatory frameworks (EPBD recast, CSRD, EU Taxonomy, ETS2) provide both the mandate and the timeline for accelerated national action on building decarbonisation and climate resilience. Market evidence confirms supply-side and developer-level readiness exists: the missing infrastructure is regulatory and methodological, not commercial (see Section 6.7).
7. SBC Greece is well-positioned to serve as the national convening and coordinating body for WLC and resilience, bridging the gap between policy, academia, industry, and finance.

7.2 Next Steps

The following next steps are recommended to advance from the workshop phase to implementation:

1. **Report Submission to WorldGBC ERN:** Submit this analysis report as the Stage 3 deliverable for Greece within the ZCCRRF framework.
2. **Integration into Regional Matrix:** Translate the national enabling actions into the ZCCRRF Regional Enabling Actions Matrix format for publication on the WorldGBC portal.
3. **Formation of SBC Greece WLC Advisory Committee:** Initiate the formation of the advisory committee as the first quick-win enabling action (M.EA1), incorporating representatives from YPEN based on the relationships established during Workshop 2.
4. **Inter-Ministerial Coordination:** Follow up with YPEN to formalise the coordination mechanism agreed during the Government Leadership meetings (G.EA6).
5. **Establishment of a National Sustainable Construction Observatory:** Initiate, in collaboration with the Technical Chamber of Greece (TEE), the Ministry of Environment and Energy (ΥΠΕΝ), and the Centre for Renewable Energy Sources and Saving (CRES / ΚΑΠΕ), with SBC Greece acting as technical consultant and convening partner, the creation of a permanent national Observatory on Sustainable Construction.
6. **Stakeholder Engagement Continuation:** Maintain engagement with Workshop 1 participants through regular updates and working group invitations, and with YPEN through periodic progress meetings.
7. **Greek WLC Roadmap Development:** Use the enabling actions matrix as the foundation for developing the comprehensive Greek National Whole Life Carbon Roadmap, in alignment with the WorldGBC #BuildingLife initiative and the EU EPBD recast requirements. A detailed roadmap development and implementation pathway is set out in Section 7.3.

7.3 Roadmap Development & Implementation Pathway

Building on the next steps outlined in Section 7.2, this section sets out the pathway from the validated enabling actions to a published, governed, and resourced national WLC roadmap. The pathway is structured in two sequential phases, drafting (Phase A) and implementation (Phase B), followed by the critical success factors and enablers that must be in place for the roadmap to deliver its objectives. The pathway is anchored on the consolidated Enabling Actions Matrix (Section 5), aligned with the WorldGBC #BuildingLife methodology, and synchronised with the EU regulatory calendar, most critically the EPBD recast (Directive EU 2024/1275) transposition deadline of 29 May 2026 and the Whole Life GWP disclosure obligations applicable from 1 January 2028 for buildings larger than 1,000 m².

7.3.1 Phase A - Roadmap Drafting (Q3 2026 – Q1 2027)

The drafting phase translates the workshop outputs into a structured, time-bound, and stakeholder-endorsed roadmap document. The following actions are required:

8. **Establish the Roadmap Drafting Committee:** Constitute a dedicated drafting committee under the SBC Greece WLC & Climate Resilience Advisory Committee

(M.EA1), with formal representation from ΥΠΕΝ / ΓΓΧΣΑΠ, ΤΕΕ, academia, industry, and finance. Chaired by SBC Greece, with a designated Technical Secretariat.

9. **Adopt methodology and define scope:** Adopt the WorldGBC #BuildingLife roadmap methodology and harmonise the roadmap scope with the EPBD recast (Directive EU 2024/1275, in particular Articles 7, 9, and 11), the National Building Renovation Plan (ΕΣΑΚ), the National Energy & Climate Plan (NECP), and the forthcoming National Climate Law obligations.
10. **Conduct gap analysis:** Map each enabling action in the consolidated matrix (Section 5) against existing Greek instruments (KENAK, EPC, Building Passport pilots, Level(s) adoption, EPDs uptake, ECO Platform alignment) to identify policy, methodological, and data gaps to be closed by the roadmap.
11. **Develop sector sub-roadmaps:** Structure the roadmap into sector-specific tracks, residential, non-residential (commercial / hospitality / office), public buildings, and infrastructure, each with tailored interventions, milestones, and KPIs reflecting the Greek building stock profile.
12. **Set baseline and milestone targets:** Establish a 2026 baseline year and define WLC reduction milestones for 2030, 2040, and 2050 aligned with the EU climate trajectory (–55 % by 2030, climate neutrality by 2050) and the WorldGBC Net Zero Carbon Buildings commitment.
13. **Formalise the institutional framework:** Sign a Memorandum of Understanding (MoU) between SBC Greece and ΥΠΕΝ / ΓΓΧΣΑΠ defining roles, deliverables, governance, and the formal status of the roadmap as a national reference instrument supporting EPBD transposition.
14. **Public consultation:** Run a structured consultation process via the OpenGov platform and through regional workshops co-hosted with the Technical Chamber of Greece (ΤΕΕ), ensuring participation by Workshop 1 stakeholders, regional authorities, and civil society.
15. **Endorsement and publication:** Secure endorsement from the SBC Greece Board of Directors, ΥΠΕΝ, and ΓΓΧΣΑΠ; publish the final roadmap on www.sbcgreece.org and www.ypen.gov.gr as a deliverable of the WorldGBC #BuildingLife II Capacity Building Programme.

7.3.2 Phase B - Roadmap Implementation (Q2 2027 onwards)

Following publication, implementation requires governance structures, sustained financing, and a transparent monitoring system. The following actions enable the roadmap's transition from document to delivery:

1. **Implementation governance:** Operate a Steering Committee (chaired by ΥΠΕΝ, co-chaired by SBC Greece) and a Technical Secretariat hosted by SBC Greece, accountable for coordination, reporting, and stakeholder management, building on the inter-ministerial coordination body (G.EA6) established in Phase A.
2. **Resource mobilisation:** Secure financing across complementary instruments: the residual envelope of the National Recovery and Resilience Plan (Greece 2.0 / RRF), the EU Modernisation Fund, the LIFE Programme, Horizon Europe, and private blended-finance vehicles to be developed under F.EA2 (Finance Pillar).

3. **Phased workstream activation:** Activate enabling actions in the sequence defined by the matrix, quick wins (Q4 2025–2026), foundational actions (2026–2027), and mainstreaming actions (2027 onwards), anchored on the matrix codes (G.EA1–G.EA6, T.EA1–T.EA5, F.EA1–F.EA3, D.EA1–D.EA4, M.EA1–M.EA4).
4. **Annual progress reporting:** Publish an annual roadmap progress report to ΥΠΕΝ, the SBC Greece membership, and the WorldGBC ERN, with quantitative tracking against matrix indicators (e.g. kgCO₂e/m²/year benchmarks, EPDs uptake, Building Passport coverage, certified WLC assessors).
5. **Milestone reviews:** Conduct a mid-term review in 2030 and milestone reviews in 2035 and 2040, recalibrating targets in light of EU regulatory developments (ETS2 extension to buildings, EU Taxonomy revisions, Minimum Energy Performance Standards) and Greek market evolution.
6. **Live KPI dashboard:** Develop and maintain an open-access KPI dashboard (under D.EA3, open-access national building carbon database), tracking progress on each enabling action and providing transparent indicators for policymakers, investors, and the public.

7.3.3 Critical Success Factors & Enablers

The following enabling conditions must be in place and actively maintained, for the roadmap to deliver its objectives. They reflect both the structural challenges identified across all five pillars and the formal commitments made by SBC Greece in its EPBD recast position statement to the Minister of Environment and Energy:

1. **Sustained political ownership:** Continued ministerial-level commitment from ΥΠΕΝ and ΓΓΧΣΑΠ, with cross-ministerial coordination (Ministry of Development, Ministry of Finance, Ministry of Infrastructure & Transport) to ensure regulatory and fiscal alignment.
2. **National WLC Framework - mandatory WLC reporting infrastructure:** Operationalisation of the EPBD recast Article 7 obligation - Whole Life GWP disclosure for buildings larger than 1,000 m² from 1 January 2028 and for all new buildings from 1 January 2030 - supported by a dedicated National WLC Framework developed by SBC Greece, as formally committed in the EPBD position statement to the Minister of Environment and Energy.
3. **National WLC/LCA Assessors Registry - common methodology and qualified professionals:** Establishment of a National WLC/LCA Assessors Registry (per the SBC Greece commitment in the EPBD position statement), specifying minimum qualifications, accredited training pathways (CPD via TEE / SBC Greece / universities under T.EA5 and M.EA3), and audit / quality-assurance procedures.
4. **Reference-Building Pilot - data and EPDs infrastructure:** ECO Platform-aligned national EPDs ecosystem, KENAK extension to embodied carbon (D.EA2), and the Reference-Building Pilot committed to in the EPBD position statement, providing the empirical baseline for benchmarks and policy calibration, in coordination with the National Sustainable Construction Observatory (see Section 7.2).
5. **EU regulatory coupling:** Active alignment with the EU Taxonomy, CSRD, ESRS E1, ETS2 (buildings, 2027), and the forthcoming MEPS framework, translated into Greek practice through joint guidance issued by SBC Greece and ΥΠΕΝ.

6. **Adequate and predictable financing:** A blended-finance architecture combining public funds (RRF residual, Modernisation Fund, LIFE, Horizon Europe), market-based instruments (green loans, sustainability-linked bonds), and fiscal incentives (ENFIA reduction, expedited permitting), with clear disbursement criteria tied to roadmap KPIs.

Annex: Workshop Participant Information

About SBC Greece

The Sustainable Building Council Greece (SBC Greece – www.sbcgreece.org) is an Established Member of the World Green Building Council and part of the European Regional Network (ERN). SBC Greece serves as the national platform for advancing sustainable, zero-carbon, and climate-resilient buildings in Greece, convening stakeholders from across the construction value chain.

About WorldGBC

The World Green Building Council (WorldGBC – www.worldgbc.org) is a global network of Green Building Councils in over 75 countries, united in the mission to achieve a built environment that is sustainable, healthy, and resilient. The ZCCRRF initiative is part of WorldGBC's broader strategy to develop national and regional roadmaps for building decarbonisation and climate resilience.

Workshop Organisation

These workshops were part of the BL II (BuildingLife II) Capacity Building programme, organised by SBC Greece in collaboration with the WorldGBC ERN and with the support and involvement of Ministry of Energy & Environment.

Annex A: Workshop Agenda

Annex B: BL II Capacity Building Workshop Overview

Annex C: ZCCRRF Survey Results Summary (May 2025)

Annex D: Workshop RSVP Tracking & Participant List

Annex E: Workshop Photos

Annex F: Attendance Lists

Annex G: About the ZCCRRF Framework

The Zero Carbon and Climate Resilience Readiness Framework (ZCCRRF) is a WorldGBC diagnostic methodology designed to assess the readiness of national construction markets to advance towards decarbonisation and climate resilience in buildings. The framework evaluates five strategic pillars:

Pillar	Description
Government Leadership	Existence of national policies, strategies, regulations, and institutional coordination mechanisms for zero-carbon and resilient buildings.
Technical Solutions	Availability and adoption of technologies, methodologies, and design approaches for zero-carbon and climate-resilient construction.
Finance	Financial models, incentives, ESG linkages, climate risk disclosure mechanisms, and capacity for green finance in the construction sector.
Data	Availability of tools, databases, digital solutions, transparency frameworks, and capacity for data-driven decarbonisation and resilience monitoring.
Mindset	Public commitments, national working groups, capacity development mechanisms, and broader awareness and mindset shift across the building sector.

For more information on the ZCCRRF and the #BuildingLife initiative, visit: www.worldgbc.org/buildinglife