Policy Blueprint for Net Zero: Accelerating Innovation and Action in Construction, Climate Strategy, and Water Security

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Executive Summary

The 27th International Talk on Green Business, Sustainability, and Climate Action highlighted three critical, hard-to-abate sustainability challenges and the role of innovation, leadership, and policy in overcoming them. Key areas demanding policy intervention are:

1. Decarbonizing the Cement and Concrete Industry: The industry is responsible for 7–8% of global carbon emissions. Policy is needed to accelerate the adoption of CO2 utilization technologies and waste material byproducts.
2. Closing the Net Zero Execution Gap: While the UAE has a bold 2050 Net Zero vision, the primary challenge is translating strategy into consistent, measurable action across organizations.
3. Enhancing Water and Food Security: Climate change intensifies water scarcity, but smart irrigation and root science offer a path to saving 30–50% of water use while improving crop yield.

The core recommendation is to establish policy frameworks that incentivize leadership commitment, collaboration across sectors (public-private), and R&D for transformative, scalable solutions.

Key Policy Areas & Recommendations

1. Green Infrastructure & Decarbonization in Construction

The cement industry is a major source of global CO2emissions. Innovations, such as using byproducts/waste materials (e.g., fly ash, rice husk ash) to replace up to 60% of ordinary Portland cement, and carbon capture/utilization techniques (like the use of Carbon Oxide Solution (COS) in mixing or CO2 curing), can significantly reduce this environmental impact.

Policy Recommendation	Rationale and Impact
Mandate and incentivize the use of Supplementary Cementitious Materials (SCMs)	Establish clear standards and tax breaks for construction projects that substitute a percentage of cement with industrial byproducts. This would drastically reduce CO2 emissions from cement production.
Integrate Carbon Utilization into Building Codes	Develop codes that give credit or preference to concrete cured with CO2 or containing

	sequestered carbon, acknowledging the long-term carbon sink potential.
Establish Green Finance Criteria for Infrastructure	Align bank financing for construction with ESG (Environmental, Social, and Governance) values, requiring proof of green technology implementation for project loans.

2. **Accelerating Net Zero Execution**

Research in the UAE indicates that while leadership commitment is the strongest driver, the biggest hurdle is the strategy implementation/execution gap. The greatest opportunities lie in public-private collaboration and technology/innovation.

Policy Recommendation	Rationale and Impact
Develop a Net Zero Execution Scorecard	Create a mandatory, standardized framework to monitor and measure the translation of net zero strategies into tangible results across government, semi-government, and private sectors.
Incentivize Public-Private Collaboration (PPC) for Decarbonization	Policy should prioritize partnerships for projects, as PPC is responsible for 35.4% of the total impact on sustainability performance. This includes sharing R&D resources and technology.
Prioritize Green Technology & Innovation Investment	Technology and innovation account for over 41.8% of the total sustainability impact. Policy should fund and encourage the development of technologies, including green AI, that support low-carbon transition and reduce the CO2 footprint of digital infrastructure.

3. Enhancing Climate Resilience in Agriculture

With agriculture consuming 70% of global fresh water, smart irrigation is a vital tool for climate adaptation, supporting both SDG 6 (Clean Water and Sanitation) and SDG 2 (Zero Hunger).

Policy Recommendation	Rationale and Impact
Subsidize and Standardize Smart Irrigation Systems	Provide financial incentives and technical standards for technologies like drip systems, soil moisture sensors, and AI-driven scheduling. This will make the technology accessible to smallholder farmers, enabling them to save 30–50% of water and energy while maintaining or improving crop yield.
Fund Root Dynamics and Water Use Efficiency Research	Invest in research to understand how plant roots (the "hidden half") interact with soil and water under stress. This science is key to developing drought-

	tolerant crops and more effective irrigation schedules.
Empower Youth-Led Innovation and Startups	Create dedicated funding and mentorship programs for young researchers and entrepreneurs in smart agriculture, leveraging the demographic advantage in regions like Asia and Africa to create scalable, low-cost solutions.

Conclusion and Next Steps

Policy must move beyond aspirational goals to focus on execution and transformative innovation. The path to a sustainable future requires aligning financial incentives, regulatory frameworks, and R&D with measurable outcomes in high-impact areas like construction, corporate strategy, and water management.