

# **Integrated and Interoperable Carbon Market and National Registry Infrastructure for Implementation of Article 6.2 of the Paris Agreement**





# Driving Climate Actions



An interoperable registry alone can't close the capacity gaps many countries face — from governance and legal frameworks to tracking systems. What's needed is a turnkey carbon market infrastructure, ready for deployment, to operationalize Article 6.2 and turn ambition into action.





## Chairman's Message

**Dr. Yousef Alhorr**

Founding Chairman, Global Carbon Council



As the global community moves from ambition to action under the Paris Agreement, Article 6.2 stands as a major defining opportunity — enabling countries to collaborate, attract climate finance, and deliver measurable results. Yet for many, the path to operationalization and timely implementation remains complex and uneven.

At the Global Carbon Council, we believe trust in carbon markets begins with purpose-built infrastructure not only for compliance but also for confidence. What is needed is a registry system that is integrated and interoperable, and ready for immediate deployment.

Our independent Article 6.2 national registry solution provides countries with flexible, connected infrastructure—equipped for transaction tracking, ITMO authorization, and integration with global systems. It empowers governments to operationalize Article 6.2 with speed, transparency, and credibility, preserving national sovereignty while aligning with international frameworks such as the Climate Action Data Trust and the Meta Registry.

But infrastructure alone is not enough. Successful implementation requires institutional capacity, policy clarity, and trusted partnerships. That is why we complement our platform with governance support, methodology development, and hands-on capacity building—ensuring every country is equipped to engage meaningfully in high-integrity carbon markets.

At GCC, we are committed to enabling practical, scalable, and inclusive climate action. Through collaborative leadership and resilient carbon market systems, we are helping shape the future of Article 6.2—built on integrity, transparency, and shared global purpose.



## CONTENTS

Chairman’s Message	4
Evolution of Art 6.2 of the Paris Agreement	6
Implications of Article 6.2 on Global Carbon Markets	7
Current Market Challenges in Operationalizing Article 6.2	9
Our Approach in Operationalizing Article 6.2 for countries	11
How GCC’s National Registry Solution Supports Countries	12
GCC Carbon Standard & Approval Mechanism	15
National Carbon Registry Dashboard	15
GCC Carbon Registry	15
Way forward	18

## INTRODUCTION

Article 6.2 of the Paris Agreement facilitates international cooperation by allowing countries to transfer emission reductions – known as Internationally Transferred Mitigation Outcomes (ITMOs) – to help achieve their allowing countries to achieve their Nationally Determined Contributions (NDCs) more flexibly.

However, the complexity of implementing Article 6.2 has created significant challenges for many countries, delaying their ability to operationalize this mechanism efficiently.

Recognizing the critical role that carbon markets play in achieving NDC commitments, the Global Carbon Council (GCC) is stepping forward to support countries in accelerating their Article 6.2 implementation.

Our vision is to provide the countries with access to a flexible, interoperable carbon market infrastructure through an independent national registry solution—equipped for transaction tracking, ITMO authorization, and global integration.



# Evolution of Art 6.2 of the Paris Agreement

Since its inception, Article 6.2 of the Paris Agreement has evolved significantly through successive UN Climate Conferences – notably at COP26 in Glasgow (2021), COP27 in Sharm El-Sheikh (2022), and most recently at COP29 in Baku (2024).

From Glasgow to Baku, Article 6.2 has progressed from a conceptual framework to a fully operational mechanism –

enabling countries to collaborate on emission reductions through ITMOs.

Significant progress has been made in establishing the core rules and procedures. However, continued attention is needed on enforcement, system readiness, and most importantly, the operationalization and implementation of decisions agreed upon over the past four climate negotiations.

COP	YEAR	Key Progress
COP26 Glasgow	2021	Article 6.2 rulebook adopted; accounting rules defined
COP27 Sharm El-Sheikh	2022	Reporting formats developed; authorization processes clarified
COP28 Dubai	2023	Technical work continued, but progress stalled over revocation and oversight
COP29 Baku	2024	Operational procedures finalized, Standardization of revocation rules, Registry Systems defined

After years of negotiation, countries have now agreed on how to operationalize carbon trading under the Article 6.2 framework. Six months after the adoption final procedures at COP29, the global focus must shift from design to delivery. **The time has come to move Art 6.2 from theory to implementation.**

# Implications of Article 6.2 on Global Carbon Markets

The operationalization of Article 6.2 is expected to significantly boost climate finance by creating mechanisms to channel investment into low-carbon solutions at the national level.

It places particular emphasis on the needs of developing countries, Least Developed Countries (LDCs) and Small Island Developing States (SIDS) – enabling them to access carbon markets as a means of financing climate mitigation and adaptation, without compromising their development priorities At the same time, it offers developed countries a

flexible pathway to meet their Paris Agreement commitments.

By participating in cooperative approaches, countries can leverage the benefit-sharing mechanisms under Article 6.2 of the Paris Agreement to achieve their climate goals. By engaging in Article 6.2 cooperative approaches, countries can access financial resources, advanced technologies, and capacity-building opportunities, all while contributing to global emission reduction efforts and promoting sustainable development within their borders.





Through participation in Article 6.2 cooperative approaches, countries can access:

- **Climate finance**
- **Advanced technologies**
- **Capacity-building opportunities**

—all while contributing to global emission reductions and fostering sustainable development within their borders.

### What Article 6.2 Enables for Countries

- New climate finance streams for host countries
- Cost-effective pathways to achieve NDC targets
- Greater transparency and strengthened environmental integrity
- Interoperability and trust in carbon credit systems
- Inclusion of low-emission countries, leveraging their mitigation potential
- Climate leadership positioning, attracting investment and global partnerships.



Early trades under Article 6.2 have already shown attractive pricing signals, reinforcing the value of early adoption. Countries that implement the mechanism proactively are well-positioned to unlock new channels of international cooperation and climate finance, with long-term benefits for both public and private sectors.

## Current Market Challenges in Operationalizing Article 6.2

Article 6.2 of the Paris Agreement offers a framework cooperative, market-based, and non-market-based approaches to help countries meet their mitigation targets. While the potential is widely recognized, translating this mechanism into real-world implementation remains complex.

One of the most critical challenges is the prevention of double counting – essential to ensuring transparency, environmental integrity, and trust in the system.

Beyond that, the broader issue lies in the limited market applicability and attractiveness of Article 6.2 in many national contexts. This is largely due to:

- A lack of alignment with internationally recognized standards (e.g., CORSIA, ICVCM, ICAO)
- Limited technical expertise and institutional capacity, particularly in developing countries and LDCs
- Absence of clear regulatory frameworks to support ITMO transactions
- Lack of infrastructure to register, authorize, and track carbon transactions
- Low market liquidity, which hinders demand–supply matching
- For many countries, the idea of building a new national standard from the ground up is not only time-consuming, but also resource-intensive.

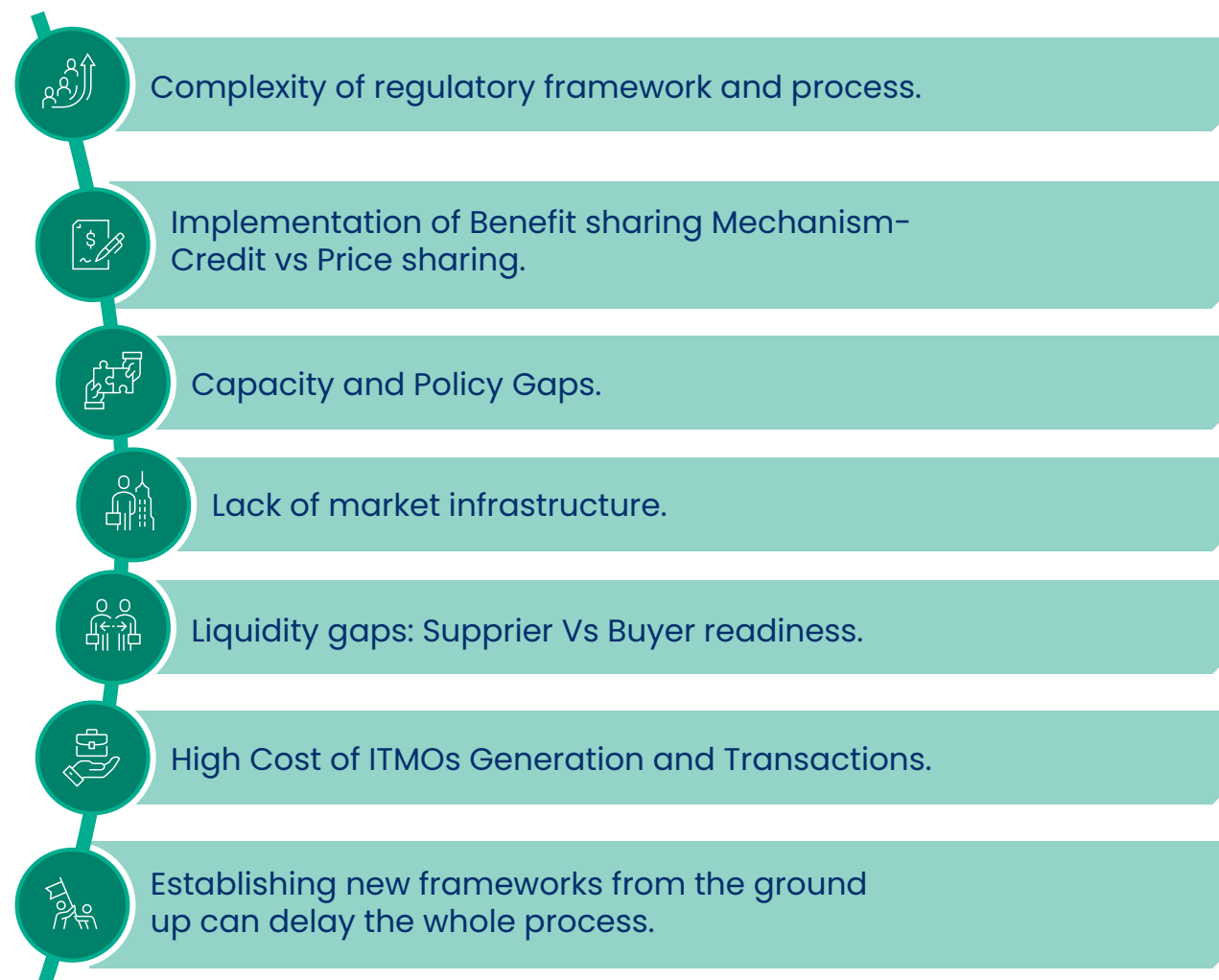
### These barriers underscore the urgent need for:

- Targeted technical support
- Capacity building
- Access to internationally aligned infrastructure

GCC recognizes these challenges and offers a ready-to-deploy, interoperable registry and carbon market infrastructure—designed to help countries operationalize Article 6.2 efficiently, credibly, and in alignment with best global practices.

Many countries face deep-rooted capacity gaps — from institutional readiness to regulatory frameworks — making it impossible to activate Article 6.4 with just an interoperable registry. What’s needed is the full architecture: governance, standards, legal frameworks, transaction and tracking systems. **This is more than a concept — it’s a turnkey carbon market infrastructure built for immediate deployment.** Designed to operationalize Article 6.2 on the ground, now, it bridges ambition with execution — where it matters most.

#### Barriers Countries Face in Operationalizing Article 6.2



## Our Approach in Operationalizing Article 6.2 for countries



GCC is committed to supporting countries in implementing Article 6.2 through its end-to-end Carbon Market Infrastructure initiative.

As one of the leading carbon standards from the Global South - recognized under ICROA and CORSIA - GCC is uniquely positioned to issue Article 6.2 - eligible carbon credits that help countries meet their NDC targets.

Backed by a highly credible Advisory Board and Regulatory committee, GCC has emerged as a prominent VCM Standard. It offers transparent, secure, and agile infrastructure that enables project owners and buyers to participate confidently in voluntary and cooperative carbon markets.



GCC's approach is centered on delivering a white-labeled, interoperable carbon registry and market infrastructure, customized for national use. This system serves as the backbone of a country's Article 6.2 implementation roadmap—designed to accelerate progress toward net-zero goals.

**Key Capabilities Include:**

- Project Registration & Issuance aligned with international best practices
- Authorization & Approval features at every stage
- Real-Time Tracking & Transaction management
- Linkages to Domestic & International Carbon Markets
- Interoperability with agreed international standards
- Country Admin Dashboard for full governance control
- Reporting Tools aligned with UNFCCC BTR requirements

This comprehensive solution doesn't just offer tools—it connects countries to an active carbon marketplace with access to domestic buyers, international exchanges, and trusted counterparties, enhancing both liquidity and scalability of ITMO transactions.

## How GCC's National Registry Solution Supports Countries



The GCC National Registry is purpose-built to support the practical implementation of Article 6.2. It offers a secure, seamless, and interoperable digital environment for tracking, authorizing, and reporting ITMO transactions in alignment with international best practices.

Designed with user experience, national sovereignty, and global compatibility in mind, the registry provides governments with full control while ensuring ease of use for all stakeholders involved in carbon market participation.

## Key features of the GCC National Registry Solution:

### White label solution to operate under their own branding

Each country can log in through a dedicated portal alongside a dedicated domain url; customized to reflect their national identity and governance. The solution offers full autonomy in decision-making, while benefiting from a standardized, secure, and scalable digital infrastructure to run their carbon market operations efficiently and independently.

### White-Label National Portal

Each country operates through a fully branded, dedicated portal and domain—customized to reflect national identity and governance structures. While benefiting from a standardized, secure infrastructure, countries retain complete operational autonomy.

### Sovereign Control over ITMO Authorization

National focal points have full authority to register, approve, and issue ITMOs. Built-in approval mechanisms support decision-making in line with regulatory guidance, ensuring compliance with transparency and corresponding adjustment requirements under Article 6.2.

### Advanced Tracking & Real-Time Updates

Every ITMO is uniquely serialized as per CARP nomenclature, with real-time updates on ownership, transfers, credit usage, and adjustments—ensuring full lifecycle traceability.

### Country-Specific Dashboard

The system facilitates seamless communication between the National Registry Dashboard, the GCC Project Portal, and the Transactions Platform. This integration brings together the full carbon market ecosystem under one interface—ensuring speed, alignment, and operational efficiency for host countries.



## Interoperability & Integration with Independent Crediting Programs

The solution is fully compatible with external standards and platforms via API and FTP integrations. Countries can choose which international crediting programs to connect with—allowing for consolidated, standards-aligned reporting and registry visibility.

## Comprehensive Work-flow Interface

A centralized, role-based interface supports the entire ITMO lifecycle—from project submission to issuance and transaction. The system includes step-by-step handling of:

- AINs, (Action Information Notes)
- Project for registration and issuance workflow
- LoI, (Letters of Intent) and LoA, (Letters of Approval)
- Document Submission for verification and compliance
- Credit allocation
- Transfer/Retirement & Cancellation

## Effortless Accessibility – Anytime, Anywhere

The registry is available through a country-specific secure web portal, accessible from any device. This ensures uninterrupted access for all authorized stakeholders—regardless of location or time zone.

## One-click BTR reporting capability

The registry includes built-in tools to generate relevant data/information for Biennial Transparency Reports (BTRs) and interim submissions under Article 6. These features eliminate the need for external systems—allowing countries to meet UNFCCC reporting obligations with ease, accuracy, and minimal administrative effort.

## Custody and control

Country Administrators (National Focal Points) maintain full control across all workflow stages, including:

- User account approvals
- Project and issuance request approvals
- Transaction authorizations, the platform also allows countries to hold and manage credits allocated under the Share of Proceeds mechanism.

## Integrated Communications Protocols

The system ensures direct, seamless communication between the National Registry Dashboard, the GCC Project Portal, and the Transactions Platform. This fully integrated design connects all layers of the carbon market infrastructure—giving countries a unified, real-time view and complete control over their carbon market operations.

## Security & Transparent

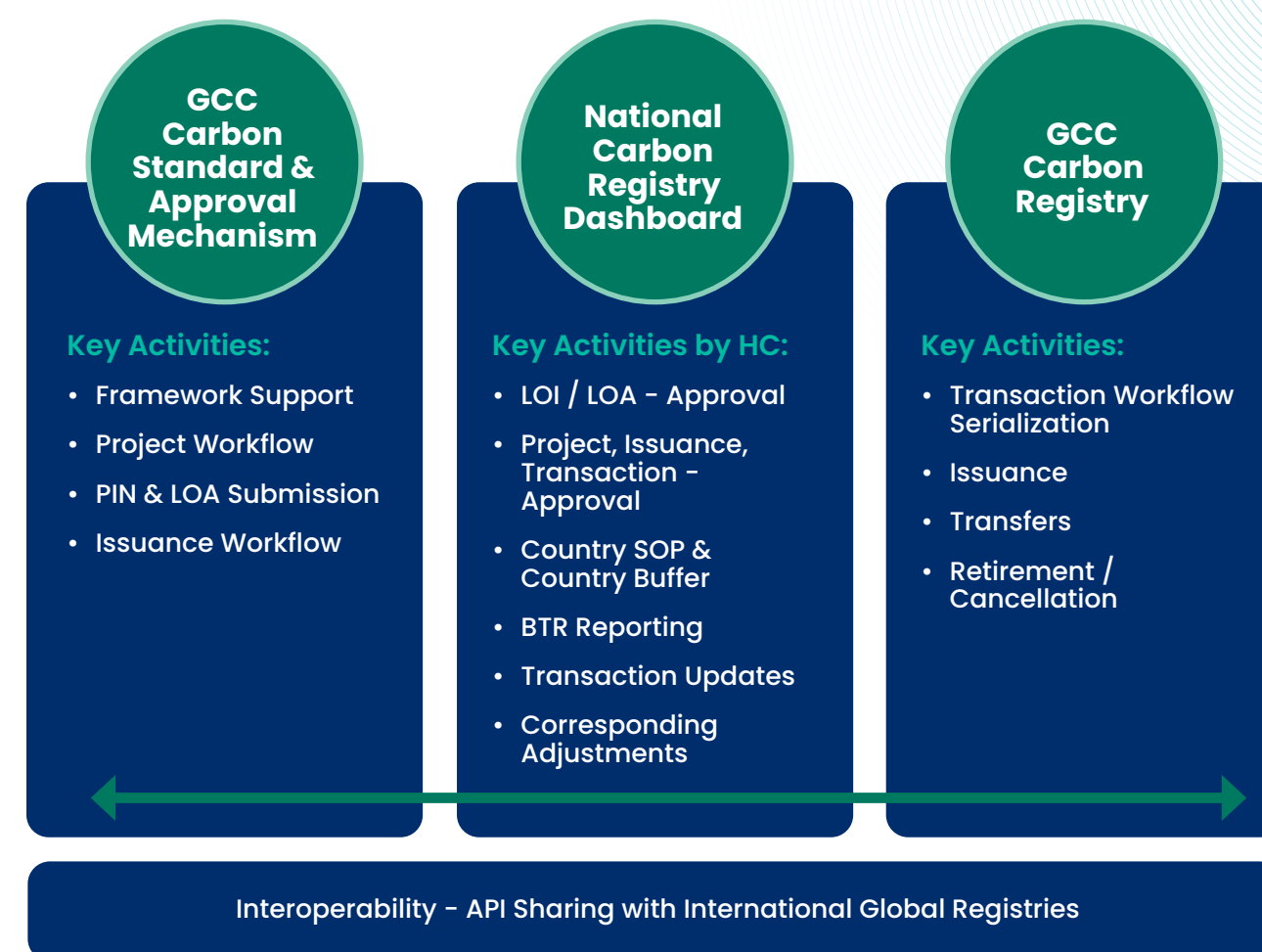
The platform is built with robust security protocols and end-to-end encryption to protect sensitive user data, transaction history, and credit ownership.

Role-based access controls and multi-factor authentication ensure that only authorized users can initiate or approve key actions. At the same time, the platform upholds transparency by maintaining a publicly accessible view of essential registry information.

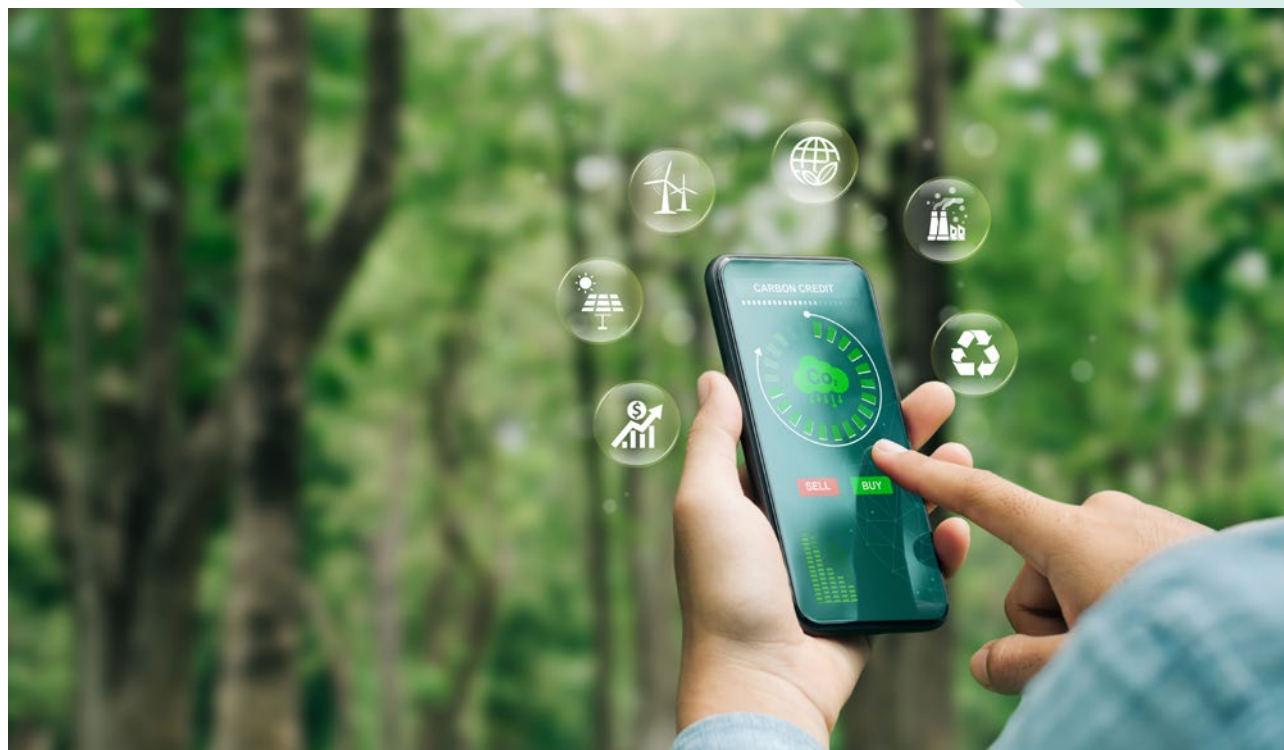
## Real-Time Notifications & Proactive Alerts

The system keeps users informed at every step through automated alerts triggered by key activities. Notifications are delivered both via the dashboard and email, ensuring that critical actions are never missed and response times remain prompt.

## Structural Overview of Art 6.2 Registry & Dashboard







## Methodology Support

GCC supports countries in adapting existing or developing new methodologies that reflect national priorities and sector-specific realities, ensuring both environmental integrity and local relevance.

We work closely with national stakeholders to co-develop methodologies tailored to key sectors such as agriculture, waste, energy, and forestry, enabling governments to approve and advance projects aligned with their NDC goals and Article 6.2 participation.

## Governance & Capacity Building

GCC provides hands-on training and capacity-building workshops for national teams to support the long-term success of Article 6.2 implementation.

Through tailored training, knowledge exchange, and access to digital tools, countries are empowered to build institutional readiness and confidently engage in cooperative climate action.

## Reconciliation & Credit Accounting

The platform provides built-in support for credit and financial reconciliation, enabling countries to accurately track credits, charges, and financial transactions across all accounts. This ensures transparency and simplifies the process of managing fees, charges, and credit flows from platform users.

## Market Access

The GCC National Registry includes opt-in integration with the S&P Global Commodity Insights Meta Registry®, enabling access to a wide range of liquidity platforms.

It is also readily connected to the World Bank's Climate Action Data Trust (CADT) and can be linked to other carbon marketplaces and exchanges, offering countries a seamless pathway to engage with both domestic and international carbon markets.

## Built-In Payment Gateway Integration

Countries can activate the platform's secure, built-in payment gateway to facilitate seamless financial transactions. This allows governments to directly collect corresponding adjustment fees, and other applicable payments—fully aligned with their national benefit-sharing mechanisms.

## Cost Effective Implementation

GCC's registry solution is designed to be deployed at minimal cost, enabling countries to achieve a fast and efficient launch of their national registry. This ensures immediate access to carbon markets and accelerates the uptake of NDC-aligned credits at both domestic and international levels.



## Way forward

GCC recognizes both the necessity and the significant opportunities presented by harnessing the guidelines under Art 6.2 as part of the global transition to a low-carbon economy. With the world increasingly focused on the path to net-zero emissions, the ITMOs market requires to greater scale and the functional implementation to meet these ambitions.

As an emerging and globally recognised carbon market standards GCC is uniquely positioned to help define and implement best practices and contribute to the ongoing development of an effective Art 6.2 market tailored to your country's needs.

Drawing on our best practices and collaborating closely with Art 6.2 industry experts, our teams have developed a state-of-the-art IT platform designed to operationalize Art 6.2 in a seamless end-to-end solution.



**We invite you to connect with us for a personalized demonstration to explore how our platform can support your country's Art 6.2 climate ambition – delivering secure efficient, and fully sovereign climate action.**

**Kishor Rajhansa**

Chief Operations Officer

[k.rajhansa@globalcarboncouncil.com](mailto:k.rajhansa@globalcarboncouncil.com)

**Hemant Nandanpawar**

Senior Director – Climate Finance & Stakeholders Management

[h.nandanpawar@globalcarboncouncil.com](mailto:h.nandanpawar@globalcarboncouncil.com)

**Amit Thusu**

Senior Director – Climate Action

[a.thusu@globalcarboncouncil.com](mailto:a.thusu@globalcarboncouncil.com)



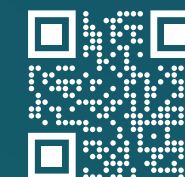


#### Contact US

communication@globalcarboncouncil.com  
Qatar Science Technology Park,  
Tech 1, Level 2, P.O. Box: 5523,  
Doha - Qatar

 [www.linkedin.com/company/globalcarboncouncil](https://www.linkedin.com/company/globalcarboncouncil)

 [@carboncouncil](https://twitter.com/carboncouncil)



[www.globalcarboncouncil.qa](https://www.globalcarboncouncil.qa)