WBG'S VISION ON CLIMATE MARKETS
Paris signals a paradigm shift to a bottom-up approach with activities driven by national reality, economic growth and political priorities.

Countries have outlined actions through their nationally determined contributions (NDCs), which focus on growth and transition to low carbon economies.

Private capital is required to leverage limited public/concessional finance to achieve those actions.

Many of the actions directly address countries’ development challenges, including job creation, and have important climate impacts as co-benefits.

Use of markets will result in increased ambition of action due to reduced costs and greater resource mobilization.

We do not have to wait for the development of international climate markets to reap the benefits of markets – domestic action will drive international cooperation.

To catalyze climate markets, the WBG will provide investment support, knowledge, advisory and advocacy services.
# Vision

**Enhance Global Ambition Through Climate Markets**

**Mobilize Capital for Resilient & Low Carbon Growth by Connecting Climate Markets**

<table>
<thead>
<tr>
<th>INVESTMENT SERVICES</th>
<th>KNOWLEDGE SERVICES</th>
<th>ADVISORY SERVICES</th>
<th>ADVOCACY SERVICES</th>
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<tbody>
<tr>
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<td>- Asset creation and exchange</td>
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<td>- Market regulation and institutional frameworks</td>
<td>- Strengthen and harmonize clients’ NDCs</td>
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**Advisory Services**

- Thought leadership on market intelligence

**Advocacy Services**

- Understand stakeholders’ expectations
- Partner with key/interested stakeholders
- Build consensus and awareness on key design elements
**Vision:** Enhance global ambition through climate markets

**Mobilize capital for resilient & low carbon growth by connecting climate markets**

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**Advisory Services**

- Underact stakeholders’ expectations
- Partner with key/interested stakeholders
- Build consensus and awareness on key design elements
RATIONALE AND GUIDANCE REPORT ON REGISTRIES
RATIONAL FOR BUILDING CAPACITY ON REGISTRIES IN COUNTRIES

- More and more countries are pursuing market mechanisms domestically and internationally.
- Issues around the environmental integrity of market mechanisms – such as double counting – have gained a great deal of attention in the wake for the Paris Agreement and ICAO’s market-based measures for international aviation.

Registries are increasingly needed!

- Significant amount of time and capacity is needed for the design and development of registries.
- It is critical for countries that are in the process of designing market mechanisms to factor in specific regulatory, administrative, functional, and technical aspects of registry development.
THREE KEY QUESTIONS FOR POLICY MAKERS:

• What type of registry systems would be the most suitable for my country?
• What legal and administrative arrangements need to be put in place?
• What resources are required for implementation?
WHICH LEVEL OF COMPLEXITY IS NEEDED?
OPERATIONAL & ADMINISTRATIVE CONSIDERATIONS

MANAGEMENT PROCESSES

OPERATIONAL MANAGEMENT
- Managing teams
- Defining, analyzing and reporting activity indicators
- Developing and updating operational procedures

BUSINESS MANAGEMENT
- Managing budget and financial planning
- Implementing regulation
- Communicating with authorities and regulators

Registry Operation and Client Relations

SUPPORTING PROCESSES

IT
- System maintenance, operations, and hosting
- Hardware management (servers, etc.)

Business
- Information enquiries
- Policy developments (international, domestic)
- Training and capacity building

Legal
- Contracts (accounts agreements, suppliers etc.)
- Litigation
- Regulatory affairs

Finance
- Invoicing
- Staff payroll
- Registry fee scheduling
- Budget and financial planning
LEGAL CONSIDERATIONS
COST CONSIDERATIONS

COVERED WITH DOMESTIC AND/OR INTERNATIONAL PUBLIC FUNDING

OR

FEE FOR OPERATIONS AND SERVICES

• Equitable treatment and acceptable prices
• Predictability and timing of revenue to recover registry costs
• Simplicity
• Participation and access
Striking the balance between creating a registry that is both nationally appropriate and internationally compatible is the registry’s biggest design challenges – especially in developing countries.

Registry functionality should follow needs: registries need only be as sophisticated as the relationships and exchanges mandated by policies.
Building on existing legal and institutional systems can be useful and efficient, but impacts must be assessed.

Fees can help to support the registry but should not be prohibitive.

Countries are starting registry design and development work: knowledge transfer is needed, but coordination is key.
REGISTRIES POST-2020
SHIFT TOWARDS GLOBAL ACCOUNTING

- NDCs establish a (notional) cap on national emissions in every country;
- Full national accounting for offset crediting (i.e. Art. 6, ICAO GMBM) for both the recipient and the source of units; unlike with KP, source country makes an equivalent reduction (“corresponding adjustment”) from its NDC are needed;

EMERGING NEEDS:

ALL COUNTRIES WISHING TO PARTICIPATE IN ARTICLE 6 WILL NEED A NATIONAL REGISTRY

NATIONAL REGISTRIES WILL LIKELY NEED TO BE LINKED TO NATIONAL GHG INVENTORIES TO ENABLE ACCOUNTING ADJUSTMENTS
DIVERSITY OF UNITS

- Paris Agreement introduces the option for Parties to use ITMOs (6.2) and a Mechanism (6.4) – which are different in nature
- Mechanisms may generate units that differ on their environmental integrity, ambition (i.e., mitigation value) => not fungible

EMERGING NEEDS:

REGISTRIES MUST BE ABLE TO SEGREGATE UNITS ACCORDING TO A NUMBER OF CHARACTERISTICS

COMMON “LANGUAGE” NEEDED FOR REGISTRIES TO COMMUNICATE WITH ONE ANOTHER (E.G. UNIVERSAL REFERENCE ID NUMBER, PROTOCOL FOR EXCHANGE OF INFORMATION)

NEW GLOBAL ACCOUNTING RULES REQUIRED TO AVOID DOUBLE COUNTING => NEED FOR A CENTRAL “SETTLEMENT PLATFORM” FOR TRACKING OF TRADES AND ACCOUNTING RECONCILIATION
WHAT IS BLOCKCHAIN?

• “Blockchain is an incorruptible digital ledger of economic transactions that can be programmed to record not just financial transactions but virtually everything of value” (Tapscott & Tapscott, 2016)
• Blockchain can combine the “pros” of peer-to-peer with the “pros” of a centralized hub by enabling multiple parties to securely transact directly between each other without a central “trusted” authority
WHAT IS A “SMART CONTRACT”?  

• A “Smart Contract” refers to computer code that is capable of facilitating, executing, and enforcing the negotiation or performance of an agreement in the context of the distributed ledger (blockchain). Smart contracts are recorded as an automated set of encoded instructions (methodologies, regulations, jurisdictional considerations like taxes, etc.) and can complement or even substitute legal transactional contracts.

• A “Smart Contract” can internalize and execute mutually agreed upon equivalencies at the unit level by integrating accepted tools, and thus decouple the mitigation, adaptation and sustainable development co-benefits of climate actions
## ADDRESSING POST-2020 NEEDS

<table>
<thead>
<tr>
<th>Blockchain Element</th>
<th>Post-2020 Needs</th>
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<tbody>
<tr>
<td>Accumulative, immutability</td>
<td>• Security of transaction (e.g., fraud prevention)</td>
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<td>• Robust accounting, double counting control</td>
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<td>• Auditable</td>
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<tr>
<td>Decentralized infrastructure</td>
<td>• Cost efficiency</td>
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<td>• Other peer-to-peer efficiency (e.g., transaction time)</td>
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<tr>
<td>Smart Contract</td>
<td>• Environmental integrity and other parameters of importance to Parties</td>
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<td>• Diversity of units</td>
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<tr>
<td>Permissioning</td>
<td>• Transparency</td>
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<td></td>
<td>• Security and confidentiality protected as necessary</td>
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<tr>
<td>Encrypted transactions</td>
<td>• Security against IT attack</td>
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</table>

(Adapted from Macinante, 2017)
IN SUMMARY…
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Country Engagement
- The WBG will continue to increase its assistance to client countries in providing capacity building for the infrastructure needed to comply with Paris Agreement
  - We’ll assist clients to make decisions following the guidance in the report;
  - We’ll increase our reach through PMR, NCM, TCAF, Forestry funds, CMUs, etc.

Technology
- The WBG will deepen its knowledge and pilot new technologies (e.g., blockchain, smart meters and contracts) that may serve its clients under a post-2020 scenario
  - We’ll deepen our understanding of disruptive technologies through reports, blueprints with internal (Blockchain Lab and TFs) and external collaboration
  - We’ll pilot these technologies to respond to tricky questions with real-case application