



Carbon Markets 101

Accelerating NDC implementation

Agenda

- Opening of the session – Martin (2 min)
- Overview of carbon markets and environmental integrity – Leticia (15 min)
- Social integrity of carbon markets – Jen (8 min)
- Peru CO experience engaging in carbon markets – James (10 min)
- Q&A – All (25 min)



Compliance carbon pricing instruments

Non-market-based instrument

Carbon Tax

Gov sets price on carbon reducing demand for high-emitting goods.

Usually levied on fossil fuels (can be regressive in its impact hurting poorer people).

Certainty of price as it is fixed per ton of CO₂.

Less certainty about the extent of results in terms of emission reductions/ mitigation.

Potential welfare impacts must be considered.

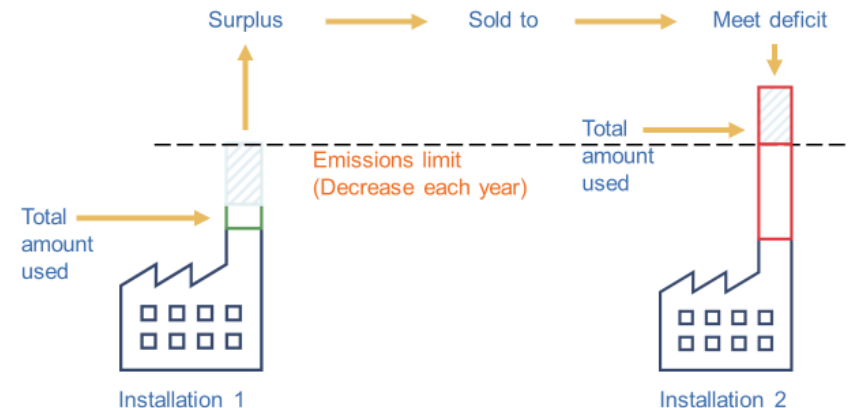


Market-based instrument

Emission Trading System (ETS)/“cap-and-trade”

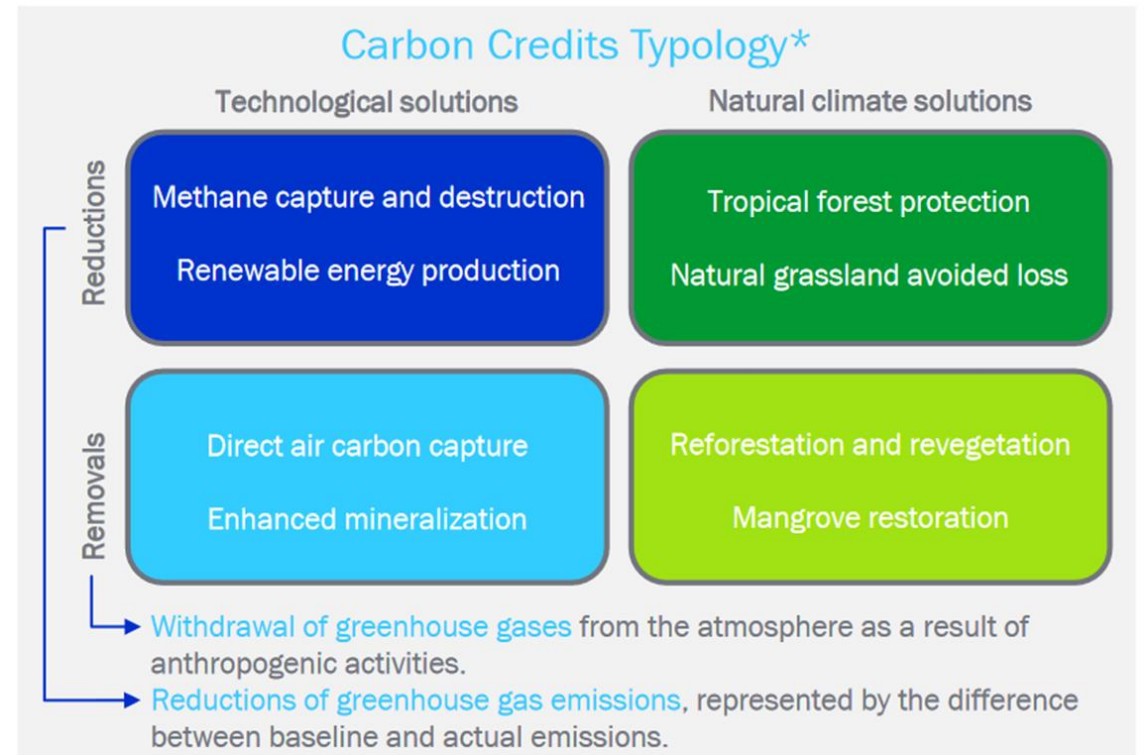
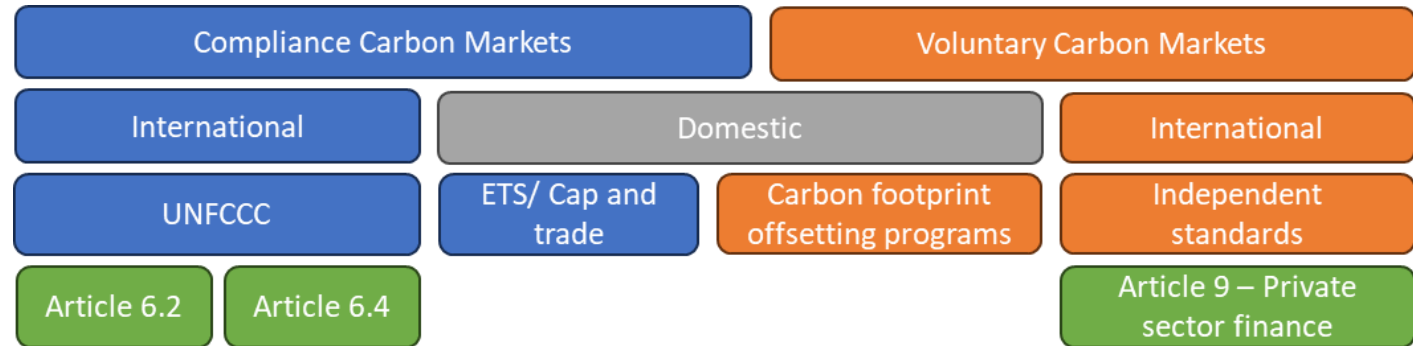
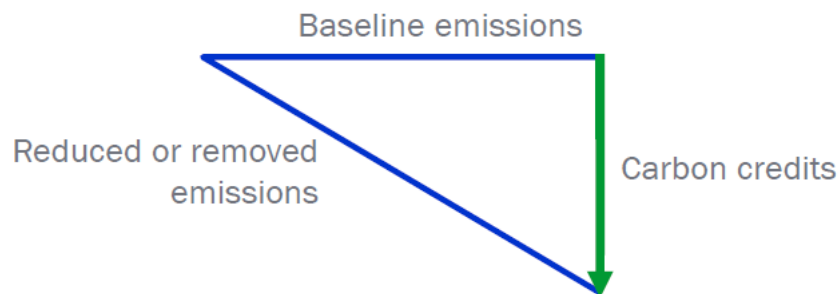
Gov sets a limit (“cap”) on total direct GHG emissions from specific sectors and sets up a market where the rights to emit (carbon permits or allowances) are traded.

- ✓ More certainty about overall emissions reductions. Approach allows participants to meet emissions reductions targets flexibly and at the lowest cost. More politically acceptable than taxes.
- ✗ Less certainty on price, which fluctuates according to market

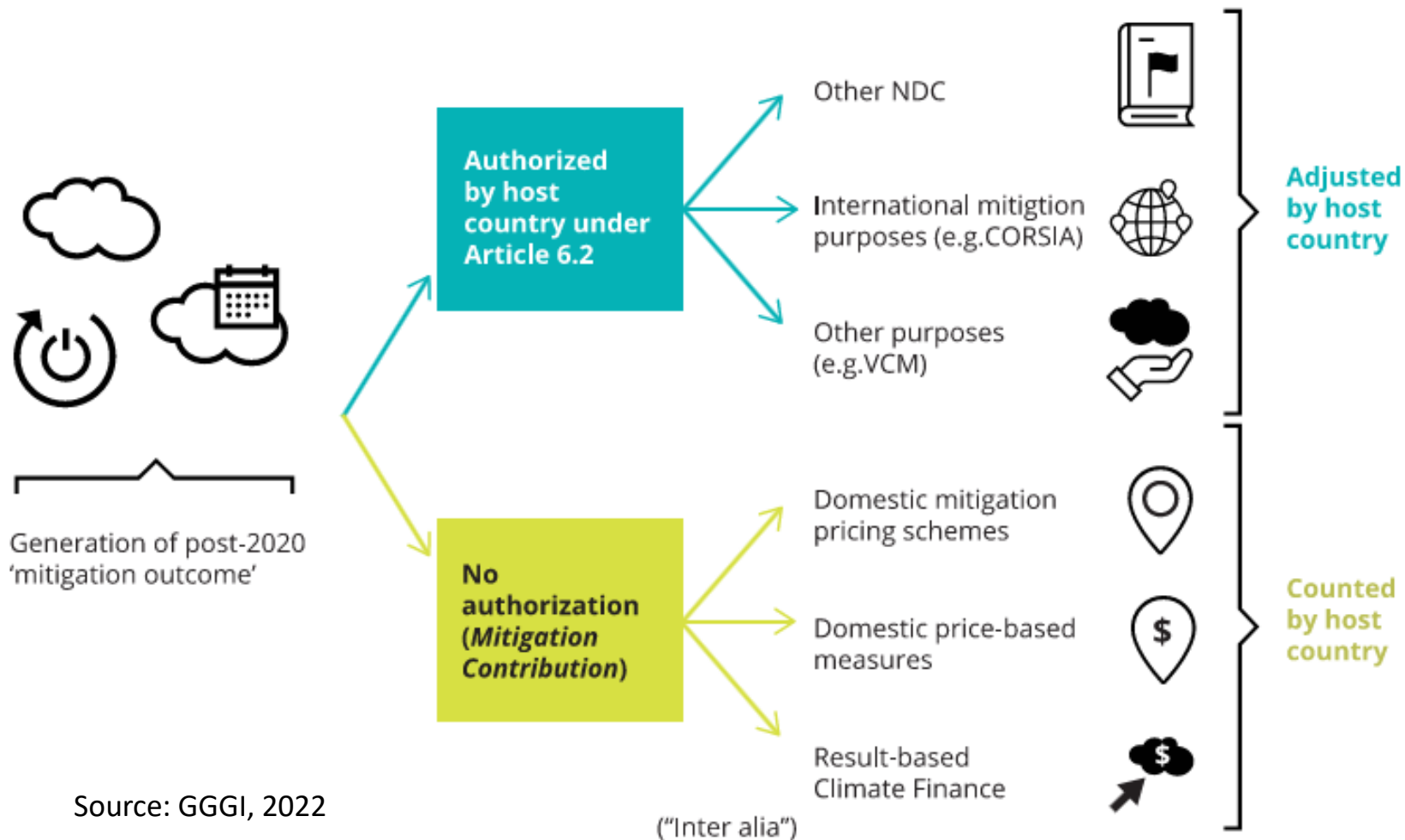


What are carbon markets?

- *Carbon markets are trading schemes that create financial incentives for activities that reduce or remove greenhouse gas emissions.*
- *Emissions reductions and/ or removals are quantified into carbon credits that can be bought and sold.*
- *One tradable carbon credit equals one tonne of carbon dioxide, or the equivalent amount of a different greenhouse gas reduced, sequestered or avoided.*



Carbon markets and NDCs



What determines if the carbon transaction is for compliance or voluntary is the decision of the national government to apply a corresponding adjustment to its NDC – not the origin of the credit.



Some challenges ...

Insufficient upfront investment.

High transaction costs.

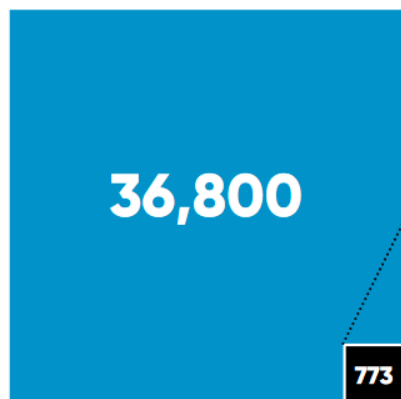
Lack of buyer commitments leads to risks for projects.

Lack of country data for accurate GHG estimation.

Uncertainties related to NDC trajectory.

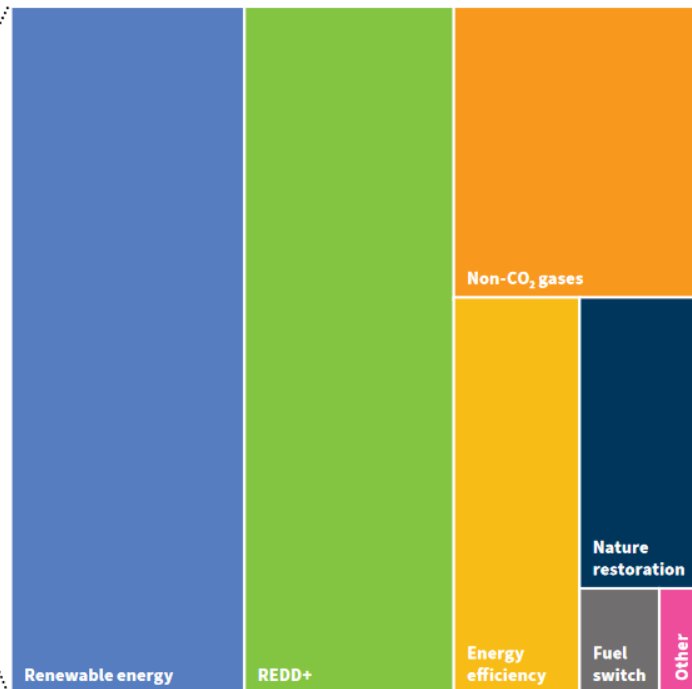
Addressing donor interests and conditions.

Annual fossil fuel emissions vs carbon credit inventory (MtCO₂e)



■ Annual fossil fuel emissions
■ Carbon credit inventory

Carbon credit inventory by project type



Lots of opportunities

Demand for ITMOs and for VCUs will increase.

Buyers want high integrity credits and a solid portfolio of climate friendly investments.

UNDP will be able to channel large-scale private climate finance for NDC implementation.

At a time when integrity is in question, UNDP's global leadership and recognition on safeguards and SDGs has opened doors to innovative partnerships and funding opportunities.

Climate Promise 2025 Service Offer

Ambition and implementation are intertwined, and all require inclusive processes to leave no one behind

Ambition

- Assessment of NDC progress, align with Net Zero and SDGs
- Build political will and societal ownership
- Strengthen targets, policies, and measures (sectoral)
- Align with existing frameworks – NAP, NBSAP, energy compacts, etc.
- Assess costs and investment opportunities

Acceleration

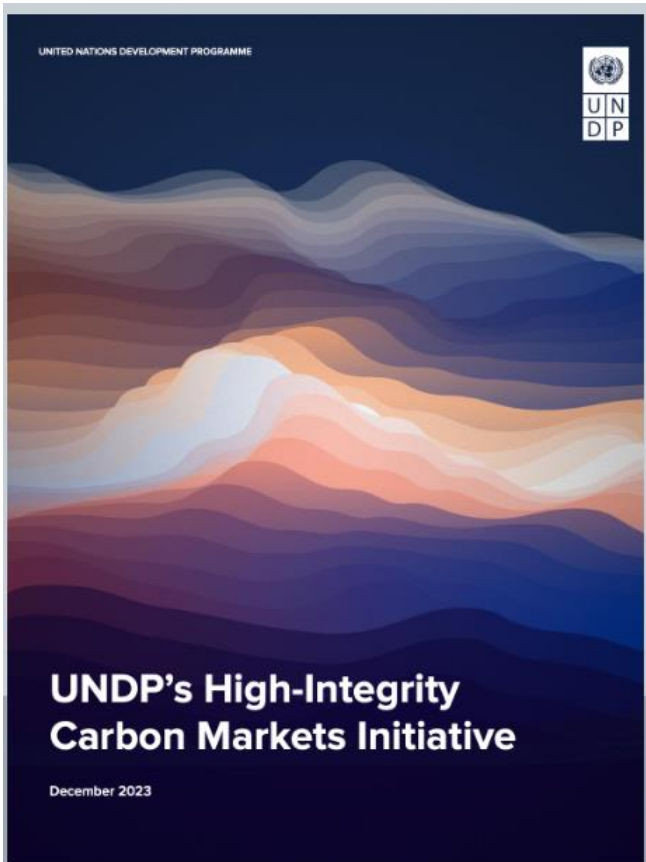
- Drive finance to deliver targets
 - Int'l public: align VF, multilat and bilat
 - Nat'l public: INFFs, bonds, CPEIRs
 - Private: Carbon Markets (HICM offer), private sector coalition
- Integrated technical support on priority areas: Adaptation, Energy, L&D, Nature

Inclusivity

- Recognize and promote a human rights-based approach
- Advance gender equality
- Strengthen effective participation and leadership
- Increase capacities and knowledge to drive implementation
- Strengthen access to and control over resources, e.g. finance, information, and technology

UNDP's High Integrity Carbon Markets Initiative

Current portfolio



Readiness	Implementation		
Offer 1 Carbon markets access strategies	Offer 2 Article 6.2 ITMOs	Offer 3 Jurisdictional voluntary carbon markets	Offer 4 Domestic carbon markets/ emission trading schemes
Cross-cutting application of high-integrity guardrails: Carbon elements; Social and environmental safeguards; Enhancement of SDGs			

UNDP ongoing support on carbon markets

Offer 2 – Article 6	Offer 3 – Voluntary Carbon Markets	Offer 4 – Domestic Carbon Pricing
<p>Readiness: Armenia, Colombia, Honduras, Indonesia, Iraq, Mali Namibia, Peru, Uganda, Uzbekistan, Zimbabwe, Brazil, DRC, Cote D'Ivoire, Kenya, Liberia, Cambodia, Indonesia, Vietnam, and Ecuador.</p> <p>Article 6.2 non-LULUCF: Ghana, Peru, Vanuatu, Georgia, Ukraine, Malawi, Morocco, Kazakhstan, Uruguay.</p>	<p>Ghana, Uganda, Bolivia, Ecuador, Costa Rica , 9 states from Brazil's Amazon region, DRC.</p> <p>LEAF → NEW business opportunity: playing the role of financial intermediary and receiving the resources from the sale of carbon credits.</p>	<p>Climate Promise: Voluntary domestic offsetting schemes in Ecuador and Chile.</p> <p>Carbon Tax: Djibouti, Egypt, Indonesia, others</p> <p>With CBAN the demand for support on these two areas is expected to grow, we are working with SFH to structure UNDP support in this area.</p>

THE GREAT CASH-FOR-CARBON HUSTLE

**These companies are certified carbon neutral.
But that may not mean what you think it does**

Rethinking The Environmental Integrity Of Carbon Credits

Revealed: top carbon offset projects may not cut planet-heating emissions

Why the UN is not climate neutral

Integrity Concerns

The looming land grab in Africa for carbon credits

Carbon Offsets and the Integrity Problem

Data exclusive: The 'junk' carbon offsets revived by the Glasgow Pact

Trading in fake carbon credits: Problems with the Clean Development Mechanism

Carbon Offsets: A Nice Climate Fairytale That Hasn't Panned Out

Carbon-Trading Plans Are Thinly Veiled Land Grabs That Displace People Globally

Was 2022 the beginning of the end for 'junk' carbon credits?



Response: Integrity Initiatives



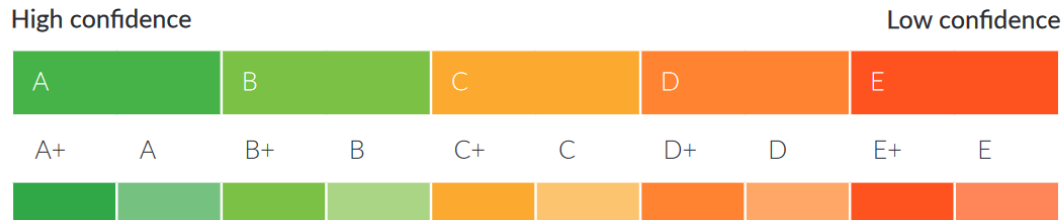
Claims Code of Practice

Building integrity in voluntary carbon markets



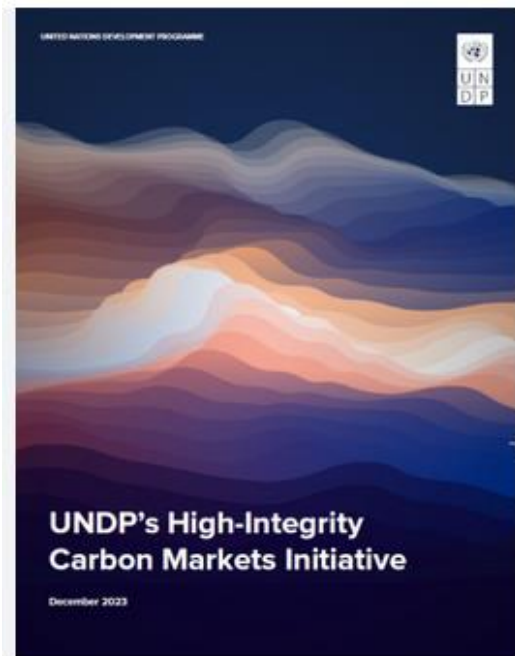
Calyx Global GHG Rating

A level of confidence in whether credits represents a unique, permanent metric tonne of CO2 reduction or removal.



Calyx Global SDG Rating

An assessment of Sustainable Development Goals (SDG) contributions, including the level of change and the quality of evidence provided by projects that are certified.





UNDP Guardrails for High Integrity

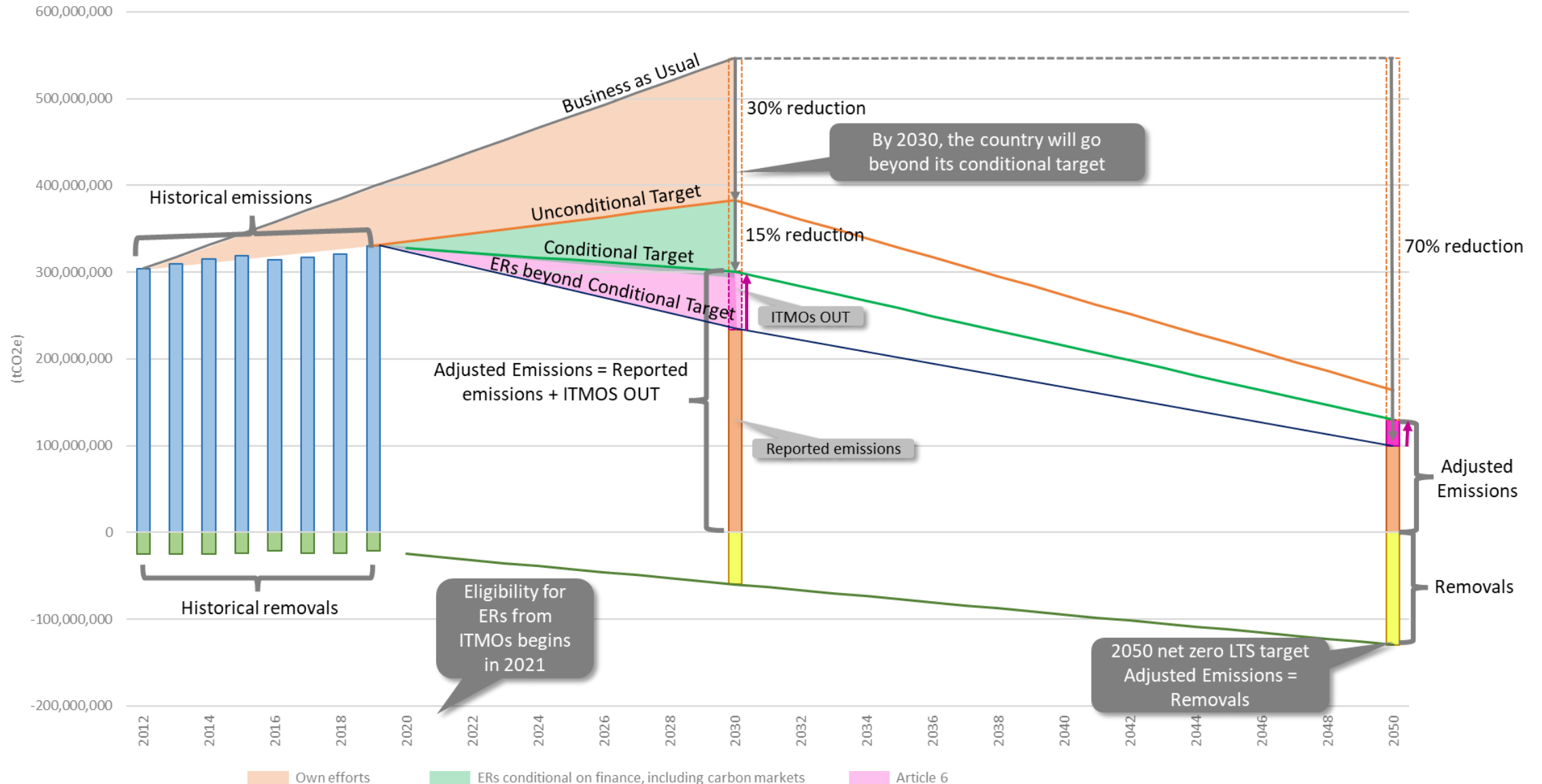
Carbon Elements

- Alignment with the Paris Agreement
- Contribution to net zero emissions by 2050
- Accountability and continuous improvements
- Robust quantification of ERs & removals
- No double counting
- Additionality
- Independent Validation and Verification
- Tracking of uniquely identified credits (registry)
- Transparency of credited mitigation activities & transactions
- Only jurisdictional or nested REDD+ projects
- Permanence and avoidance of leakage

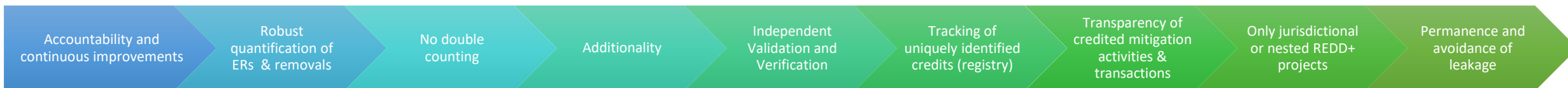
Social and Environmental Elements

- Assessment and management of environmental and social risks
- Labor rights and working conditions
- Resource efficiency and pollution prevention
- Land acquisition and involuntary resettlement
- Biodiversity conservation and sustainable management of natural resources
- Grievance Mechanism
- Independent Validation and Verification
- Indigenous Peoples, Local Communities, and cultural heritage
- Gender equality
- Robust benefit-sharing
- Cancun Safeguards (for REDD+)
- Ensuring positive SDG impacts

Alignment with the Paris Agreement and contribution to net zero emissions by 2050



Other high integrity carbon elements



Application of globally recognized frameworks and tools for carbon credit quality to the carbon programs it supports.

Assess and strengthen technical capacity and institutional and governance arrangements for MRV, in line with applicable standards

Establish or improve upon systems, procedures, guidelines roles and responsibilities for gathering, processing, and reporting on GHG emission reductions and removals, in alignment with the requirements for validation and verification by third parties under applicable standards.

Harmonize and simplify the linkages between the diverse sets of requirements and national efforts to address MRV of emissions reductions/removals, reducing the burden on countries.

Provide trainings, webinars, South-South learning exchanges related to all of the above, for governments, Indigenous Peoples, local communities and other key stakeholders.



UNDP Guardrails for High Integrity

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Social Integrity Concerns

Communities are dispossessed of their lands and territories.

Violation of Indigenous Peoples rights to consultation and FPIC.

IP rights to lands, territories, resources violated.

Destruction of cultural heritage.

No (or inequitable) share of benefits to project stakeholders.

Exclusions or exacerbation of discrimination against women and other marginalized populations.

Gender-based abuse, harassment and violence.

No access to, or unfair or impartial grievance redress procedures.

Sources of Social Integrity Concerns

Weak and fragmented system of standards, rules and accountability

Reliance on national laws

Lack of national level regulation of voluntary carbon market actors

Weak verification bodies and procedures (& conflicts of interest)

Limited upfront investment

Limited bonus for quality (this is changing)

Global Response to Social Integrity Concerns

Standard Bodies incorporate IPs and LCs into Governance Arrangements

New & Improved Standards; SES/SDG Ratings; Guidance, IC-VCM

Corporate buyers, project developers increase due diligence

Increased Scrutiny of Standards and VVB Operations

Higher Bonus on Quality Credits

Toward Convergence and Consensus

UNDP's Response to Social Integrity Concerns

Assessment & management of S&E Risks

Labour rights and working conditions

Resource efficiency and pollution prevention

Land acquisition and involuntary resettlement

Biodiversity conservation & sustainable management of natural resources

Grievance Mechanism

Indigenous Peoples, Local Communities, and cultural heritage

Gender equality

Robust benefit-sharing

Ensuring positive SDG impacts

Spreading Best Practice Standards and Guidance

Building on and Strengthening National Systems

Programmatic and Portfolio Approach

Transparent, Participatory Assessment, Management and Monitoring

More Robust Validation and Verification Methodology

Detailed 'SMART' SES and SDG Indicators

Harmonized Approach: Risk Management + Enhancement of Benefits

UNDP's Social Integrity Efforts

Embedding SES & SDGs in A6 Regulatory Frameworks

Social Integrity for Carbon Markets Toolkit

Social Integrity Training for Indigenous Peoples in Asia, Latin America and Africa

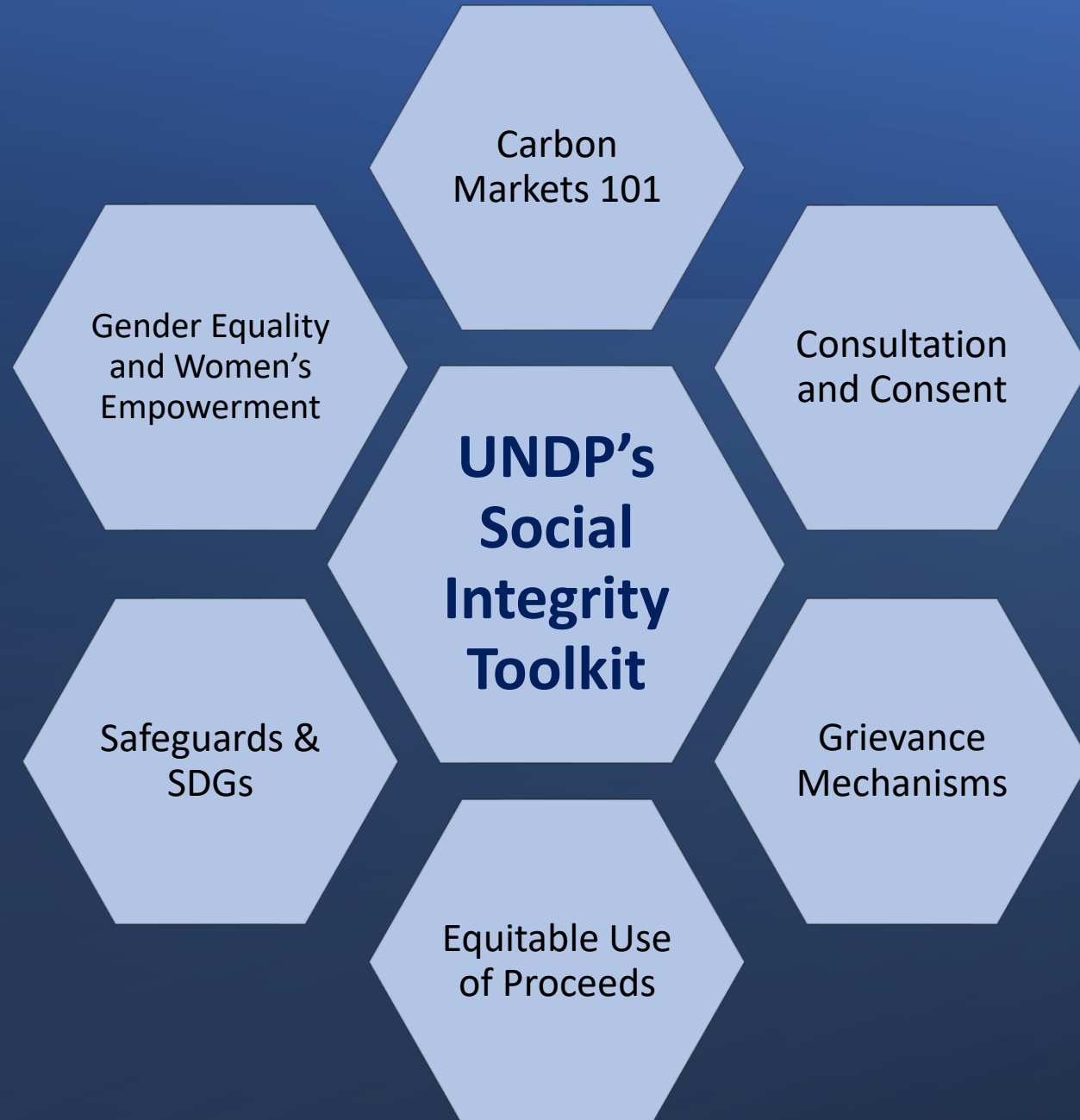
Systematizing UNDP's Approach to National Safeguards Assessments

Systematizing UNDP's Approach to Benefit Sharing for Carbon Projects

UNDP on IC-VCM Safeguards Expert Working Group

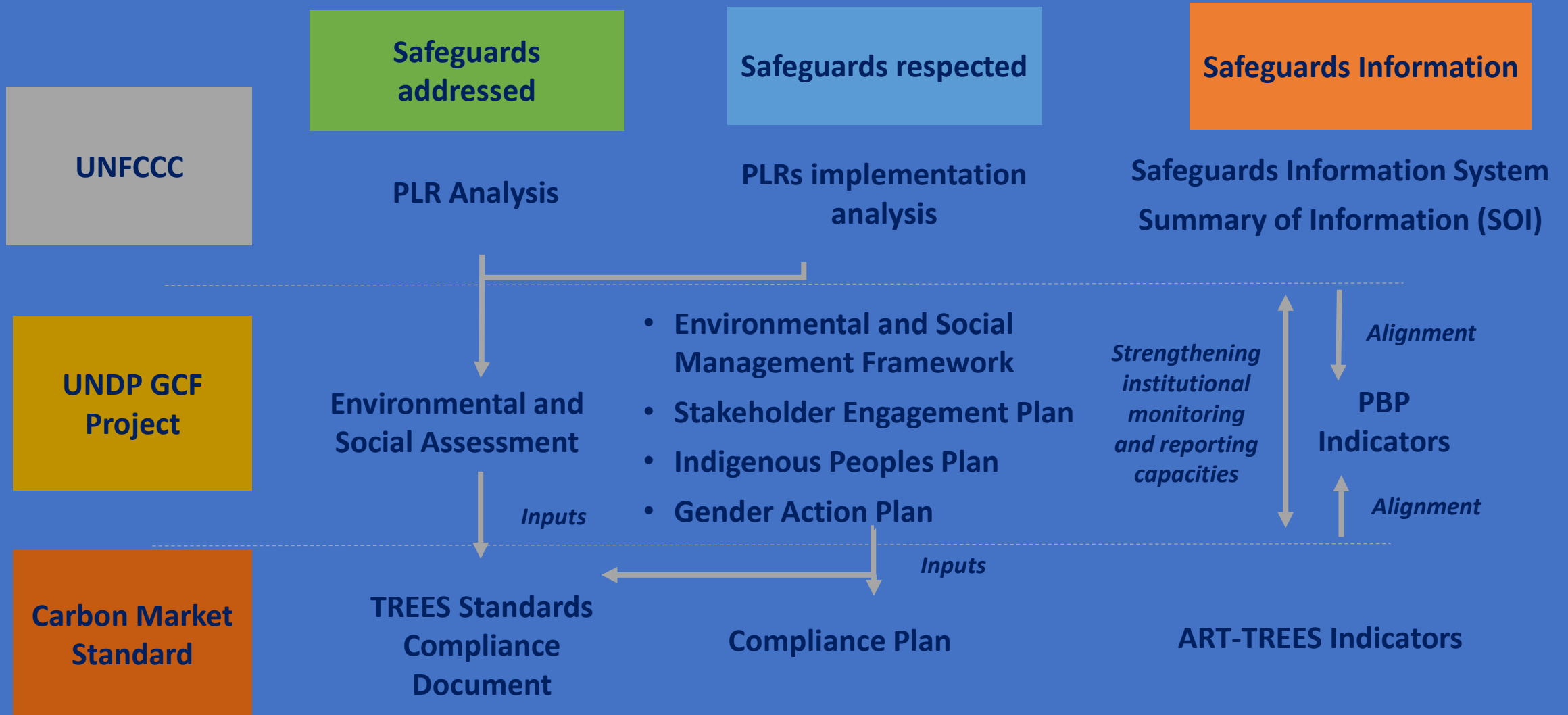
UNDP on Calyx Carbon Rating Agency's Safeguards Expert Panel

UNDP Collaboration with Verra, Gold Standard on SES & SDG Guidance



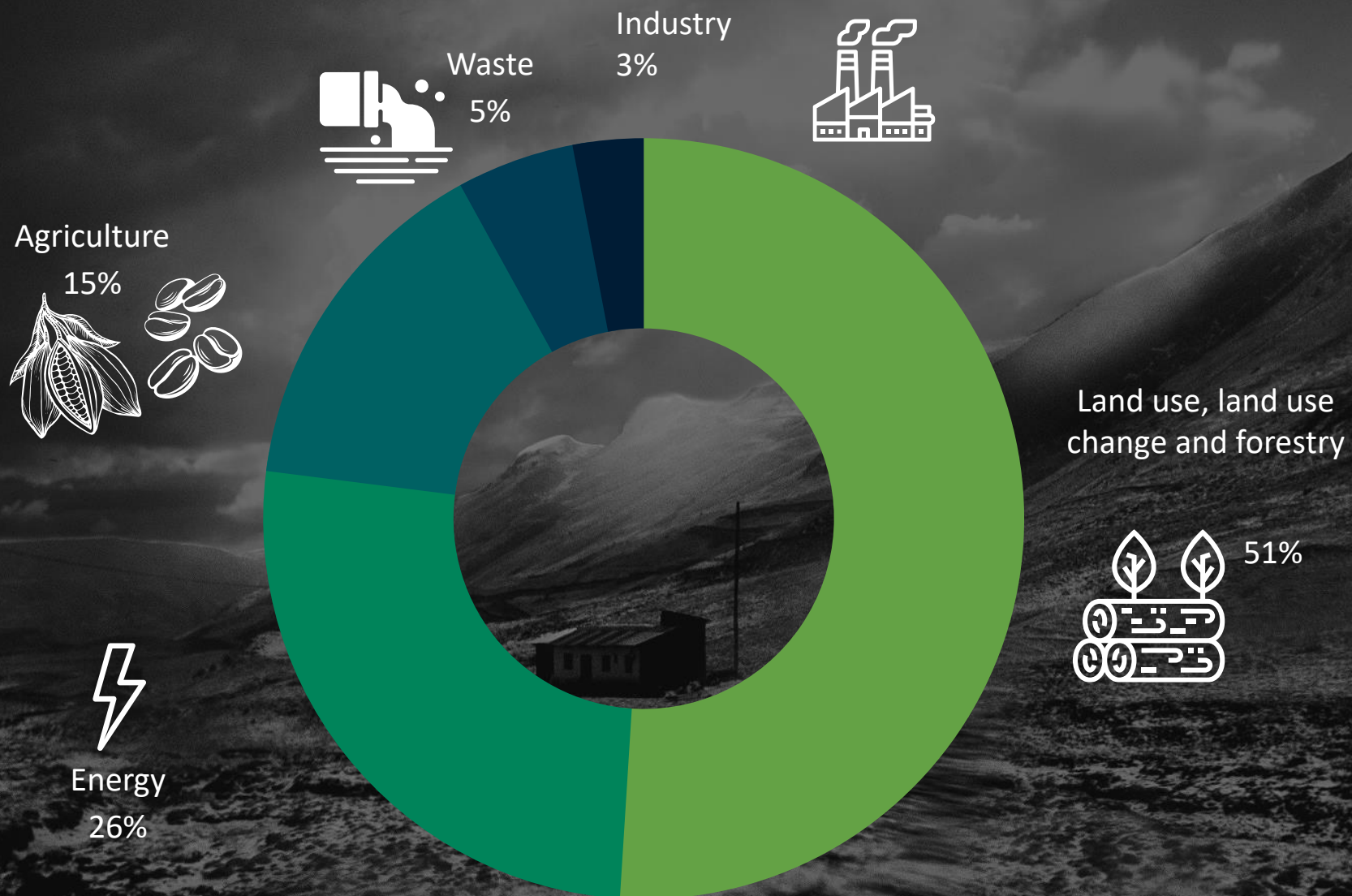
- ✓ Awareness
- ✓ Capacity
- ✓ Partnerships
- ✓ Standard-Setting
- ✓ Guidance
- ✓ Tools
- ✓ Webinars
- ✓ Technical Series
- ✓ Tailored presentations
- ✓ Links to Resources

Case Examples - Forest Sector: Brazil, Costa Rica, Ecuador, Indonesia, Ghana



Promoting climate-smart agriculture practices for sustainable rice cultivation in Peru

GHG emissions in Peru



[Source: Minam (2016). 3rd National Communication]



Nations Unies
Conférence sur les Changements Climatiques 2015

COP21/CMP11

Paris, France

Article 6.2 Paris Agreement – carbon finance



Transitioning rice production systems with climate-smart farming practices

Current System (BAU)



- Low paddy rice yields
- Low soil fertility
- Limited water availability
- High costs of pumping system, drains and river defences
- Absence of technical assistance
- Increased deforestation
- Low level of associativity
- Intensive use of pesticides.
- No Environmental Management Plan
- Varieties require permanent flooding.

Production System with Intermittent Wetting



- Improvement of rice productivity and quality.
- Reduction of production costs.
- Reduction of water consumption
- Sowing and fertilisation plan
- Implementation of IPM and EIM.
- Proper post-harvest management.
- Traceability protocols
- Proper waste management.
- Zero deforestation.
- Emission reductions.

Production systems
Low-emission rice with intermittent wetting and BAP

Reduction
785,000 tCO2e
until 2030

Potential regions ITMO Rice Peru



ITMO Rice Target : 50,000 hectáreas

Region	Rice cultivation under gravity or pump irrigation
Cajamarca	20,026.00
Arequipa	20,151.00
Tumbes	18,391.00
Huanuco	8,650.00
Ucayali	8,115.00
Loreto	2,800.00
Total	78,133.00

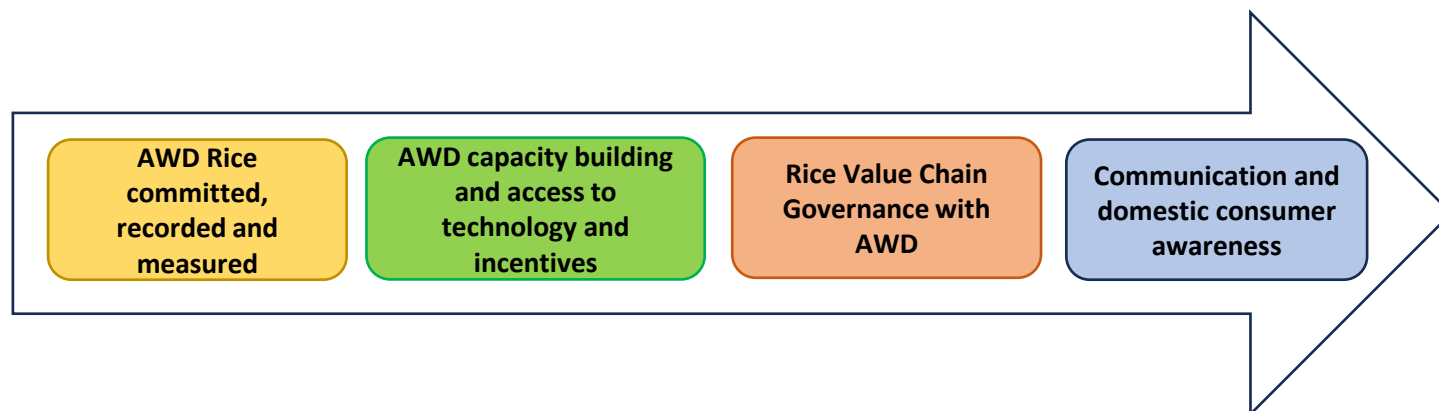
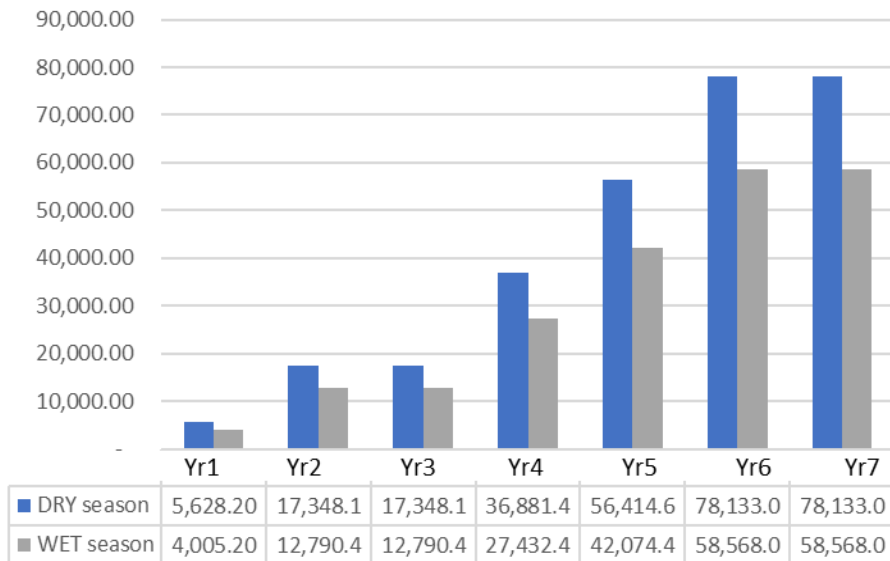
Implementation Strategy ITMO Rice Peru

Región	Rice under gravity or pump irrigation (ha)
Cajamarca	20,026.00
Arequipa	20,151.00
Tumbes	18,391.00
Huanuco	8,650.00
Ucayali	8,115.00
Loreto	2,800.00
Total	78,133.00

Objective: Implement climate-smart agriculture practices to reduce GHG from rice production in Peru

- Implementation of AWD in 12% of Peru's rice production areas (50,000 ha).
- A modified long-term irrigation programme in the target areas.
- 11,000 farmers in 06 major rice producing regions adopt efficient irrigation solutions and increase their productivity.
- 785,000 tCO₂e reduced by the application of climate-smart agricultural practices.
- Data collection, monitoring and verification protocol developed through the ITMO programme institutionalised in the country.

Total, potential area practicing AWD



Implementation Strategy ITMO Rice Peru

Objective: Implementation of climate-smart agriculture practices to reduce GHG from rice cultivation in Peru

50,000 ha AWD rice
11,000 farmers
785,000 tCO₂e reduced

R1: Intermittent dry periods in rice production reduce CH₄ emissions (50,000 ha / 785,000 tCO₂e reduced).

- Awareness raising and incorporation of producers.
- Database with geo-referenced crop.
- Agreement design and benefit sharing.
- Rice producers making use of the AWD application tool - technology delivery.
- RENAMI registration.

R2: Trained farmers adopt sustainable rice production system (11,000 farmers)

- Technical assistance programme through field schools
- Network of installed demonstration plots.
- Periodic methane gas measurement system.
- Financial and commercial incentives for AWD implementation (Inputs, government procurement, carbon credits).
- Alliances for TA with public (INIA, ANA, DRAs, SENASA, PEAH, GORE and PEDAMAALC) and private (NGOs) entities.

R3: Rice producers' organisations are strengthened and have an impact on good governance in their territories. (14 associations, committees and cooperatives)

- Organisational strengthening of rice producers' associations, committees and cooperatives.
- Strengthening leadership of young men and women rice farmers with AWD
- Alliances established between value chain actors to implement the ITMO rice programme
- Agreements with Irrigation User Boards to promote AWDs
- Financial partnerships contributing to the massification of AWDs (6 regions with PIPs or financial instruments).

R4: Sensitised rice producers and consumers value sustainable rice production

- Awareness-raising campaign involving male and female producers.
- Operational communication system for rice producers.
- Awareness-raising campaign aimed at consumers on the need to consume "sustainable rice".

What process did the PERU CO go through to develop a carbon project?

- Desk review of sector level opportunities
 - Eligibility under Article 6; synergies with NDCs; Additionality analysis
 - Capitalization of CO portfolio, experiences and capacities
- Dialogue with govt (relevant sector + UNFCCC focal point)
- Participatory development of the Mitigation Activity Design Document (MADD): compliance and alignment of project concept with carbon project criteria
- Continuing dialogue and awareness-raising about RBP modality with counterparts
- Detailed design / field validation, with emphasis on stakeholder engagement, benefit sharing and attention to safeguards

How have we engaged with the different actors throughout the project design?

- Stage 1 (MADD development): *alignment with institutional framework for carbon finance*
 - Ministry of Environment
 - Ministry of Agriculture
- Stage 2 (prodoc development): *systems approach applied to both value chain and landscape level analysis*
 - Ministry of Agriculture / National Agrarian Research Institute
 - Subnational governments
 - Farmer organizations
 - Farmers
 - Private sector along value chain

What are our four recommendations for other COs that are starting to think about carbon markets?

- Invest time in ensuring understanding of RBP modality (in contrast to traditional grant-funded projects)
- Try to crowd in early private sector, other potential partners who can share risk
- Identify opportunities that complement and offer synergies with existing CO portfolio. Complementary actions (addressing enabling conditions) may benefit from grant funding.
- Prioritize project opportunities that offer significant co-benefits for SDGs, where UNDP has a clear comparative advantage over other project developers



13 ACCIÓN POR EL CLIMA

15 VIDA DE ECOSISTEMAS TERRESTRES