MINISTRY OF ECONOMY AND FINANCE OF THE REPUBLIC OF UZBEKISTAN

G E C

ECO EXPO CENTRAL ASIA 2025

# Green Economy and Green Finance

## Current developments and reforms

June, 2025

# Long-term Decarbonization Strategy by 2055

## Overview of the LTS:

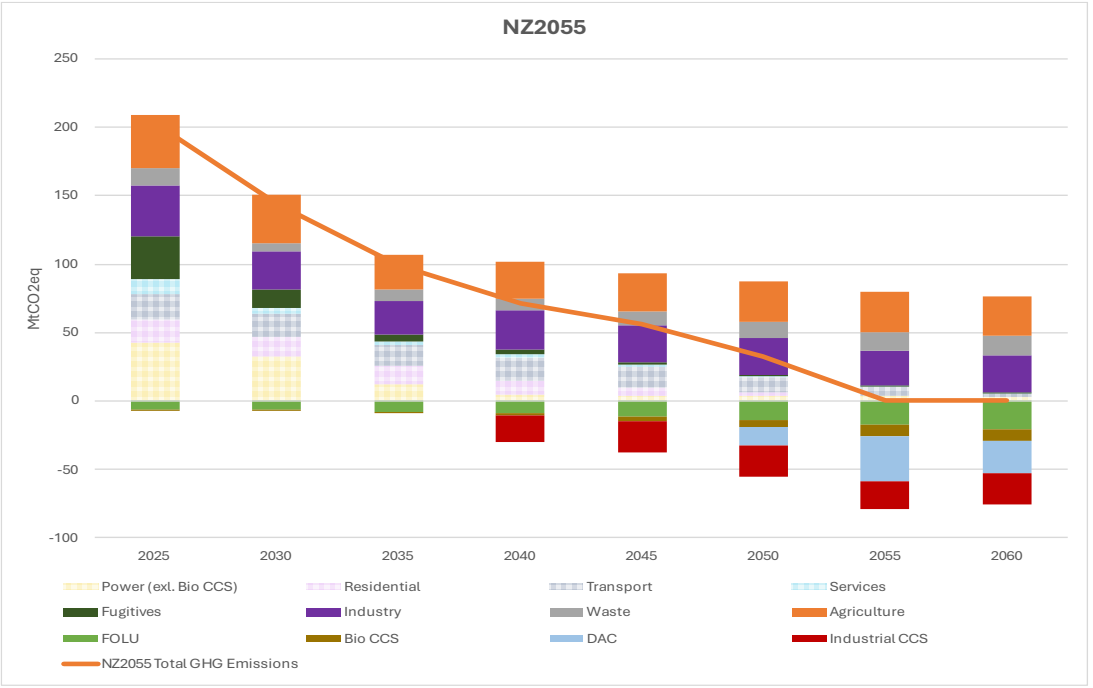
**Step 1:** Stocktaking and development of Sectoral Narratives

**Step 2:** Economy-wide quantification of the reference pathway

**Step 3:** Economy-wide low carbon development pathways

**Step 4:** Economy-wide effects of sectoral options

**Step 5:** Development of policy recommendations




# Key Benefits of Achieving Net-Zero

## Significant economic benefits

- Our models project substantial GDP growth by 2060 (492% for NZ2055 and 496% for NZ2060 compared to 2025), demonstrating that **decarbonization aligns with ambitious economic goals**.
- This growth will be fueled by investments in new technologies, a burgeoning green economy, and widespread improvements in efficiency.
- Low-carbon development will also significantly **modernize key sectors**, strengthening infrastructure and boosting productivity, efficiency, and resilience across energy, industry, housing, and transport.

## Improvement of health and air quality

- **Net zero avoids 3.5 billion tonnes** of $CO_2$-equivalent emissions (2025-2060), a major climate contribution.
- Health co-benefits from cleaner air (reduced PM2.5) are valued at approximately **$80-83 billion by 2060**, encompassing lower healthcare costs and increased productivity.
- Most impactful: **~600,000 lives saved** due to improved air quality.

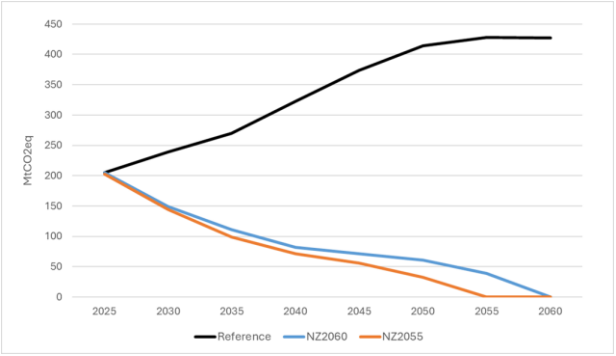

## Enhancing energy security and creating jobs

- **Clean Energy Jobs:** Expected to double in low-carbon development, creating opportunities across manufacturing, installation, operation, and maintenance in green sectors.
- **Enhanced Energy Security:** Domestic renewables could supply **over 60% of energy by 2060** (vs. 15% reference), reducing fossil fuel reliance and strengthening sovereignty.
- **Reduced Oil Imports:** Over half reduction in oil imports (vs. doubling in reference scenario), improving **trade balance** and **price stability.**

# Low-Carbon Development Pathways and Economic Impact

## Reference scenario (Reference Pathway)

- **Net zero carbon emissions by 2060 (NZ2060):** An ambitious but more gradual pathway toward full decarbonization of the economy by 2060.
- **Key features:** Assumes accelerated decarbonization efforts and investments, but with a longer transition period.
- **Net zero carbon emissions by 2055 (NZ2055):** The most ambitious and accelerated pathway, targeting full decarbonization by 2055.
- **Key features:** Requires rapid and transformative changes across all sectors, involving faster adoption of advanced technologies and higher initial investments.



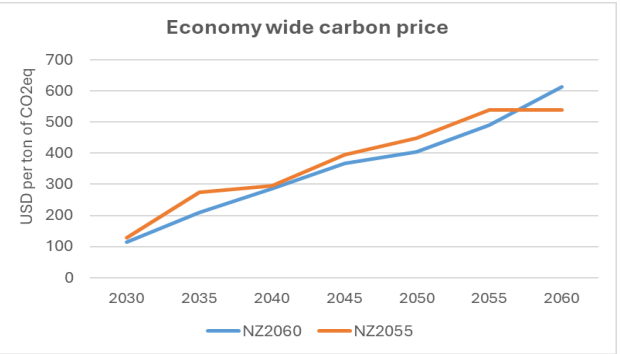

## Drivers of emission reductions

- **Policies and measures:** A wide range of government actions aimed at reducing emissions, including energy sector reforms, improved energy efficiency, transport electrification, sustainable agriculture, and waste management.
- **Carbon pricing:** Introduction of an economy-wide carbon price, expected to reach around USD 330 per tonne of $CO_2$-equivalent. This creates a financial incentive for emissions reduction and investment in clean technologies.
- **Negative emissions technologies:** Achieving net zero will require significant contributions from technologies that remove $CO_2$ from the atmosphere.
- **Land use, land-use change, and forestry (FOLU):** Forests and green areas are important carbon sinks, with the potential to absorb up to an additional 20 $MtCO_2$-eq.

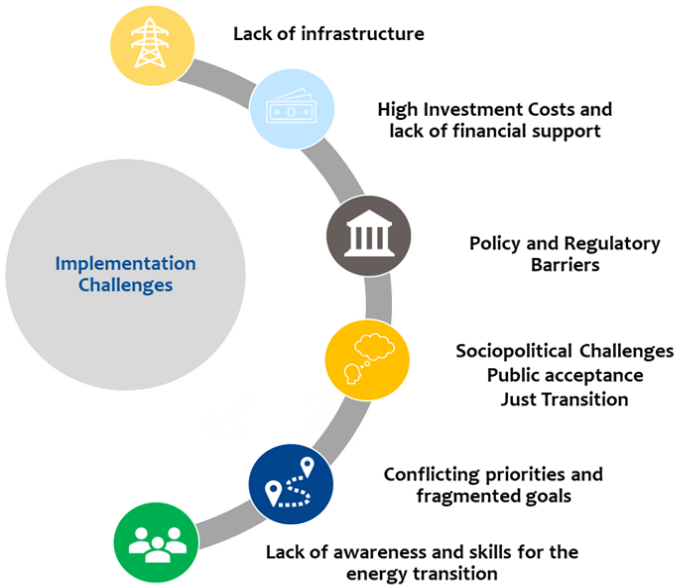
| GDP – annual growth rate | 2025 – 2040 | 2040 – 2060 |
|---|---|---|
| Annual impact of the low carbon development as compared to the Reference | -0.19% – -0.20% | +0.05% – +0.09% |

## Impact on GDP

- **Significant Growth:** Both net zero pathways project substantial GDP growth by 2060 (492% for NZ2060, 496% for NZ2055 vs. 2025).
- **Minimal Impact, Potential Boost:** Despite required efforts, GDP impact is minimal. Initial transformation by 2040 may even lead to higher growth rates than the reference scenario.
- **Broader Benefits:** Decarbonization drives innovation, new economic opportunities, enhanced energy security, and improved public health, all contributing to long-term economic growth.



# Implementation Challenges and Policy Recommendations




**Key implementation challenges:**

- **Technical:** Lack of infrastructure and reliance on immature technologies (e.g., DAC, industrial CCS).
- **Economic and financial:** High upfront investment costs and a lack of financial support.
- **Systemic, political, and institutional:** Conflicting priorities, fragmented goals, policy and regulatory barriers, and a lack of coordination.
- **Socio-political:** Issues of public acceptance and ensuring a just transition.

## Recommendations on Policy Directions

| | |
|---|---|
| **Low carbon policies** | Energy sector reforms (e.g., subsidy removal), energy efficiency programs, development of infrastructure for RES |
| **Investments and financing** | Innovative financial instruments (e.g., green bonds), incentives for climate-optimized agriculture, carbon tax |
| **R&D** | Investments in research and development to stimulate technological innovation |
| **Capacity building** | Reskilling and knowledge transfer to workers, targeted support for vulnerable groups |
| **Institutional Arrangements** | Coordination between ministries and agencies, national and international partnerships |
| **Partnerships** | Adoption of aggressive decarbonization policies and reforms in the next 6 years is crucial |

# Comparative analysis of net zero achievement scenarios: NZ2060 vs NZ2055

| Indicators | NZ2060 | NZ2055 | Comments |
|---|---|---|---|
| **Year of achieving net zero** | 2060 | 2055 | An earlier deadline requires faster and more aggressive decarbonization |
| **Cumulative GHG emissions (2025–2060), Mt $CO_2$-eq** | 3 983 | 3 426 | NZ2055 ensures a lower volume of emissions, better aligning with climate goals. |
| **Average annual additional investments (% of GDP)** | 6.2% (≈$18.74 bln) | 6,8% (≈$20,41 bln) | NZ2055 requires more investment but stimulates the economy. |
| **GDP growth by 2060 (compared to 2025)** | 492% | 496% | Slight advantage for NZ2055 due to early technology adoption. |
| **Dependence on carbon removal technologies (DAC, CCS)** | High (20–30 Mt by 2055) | Very high (50–60 Mт by 2055) | NZ2055 requires more extensive and riskier implementation of such technologies. |
| **Share of RES in electricity generation by 2060** | >95% (after 2035) | >95% (after 2035) | Both scenarios rely on almost complete energy decarbonization. |
| **Co-benefits for health (NPV 2025–2060), bln $** | 80,1 | 82,5 | NZ2055 brings more benefits due to rapid pollution reduction. |
| **Cumulative reduction in deaths (2025–2060)** | 592 786 | 605 539 | NZ2055 saves more lives through improved air quality. |
| **Benefits from forest restoration (NPV 2024–2060), bln $** | ~4.0 | ~4.0 | Comparable benefits in both scenarios. |
| **Energy security and green jobs** | Significant improvement | Significant improvement | Both pathways reduce reliance on fuel imports and double "green" employment. |

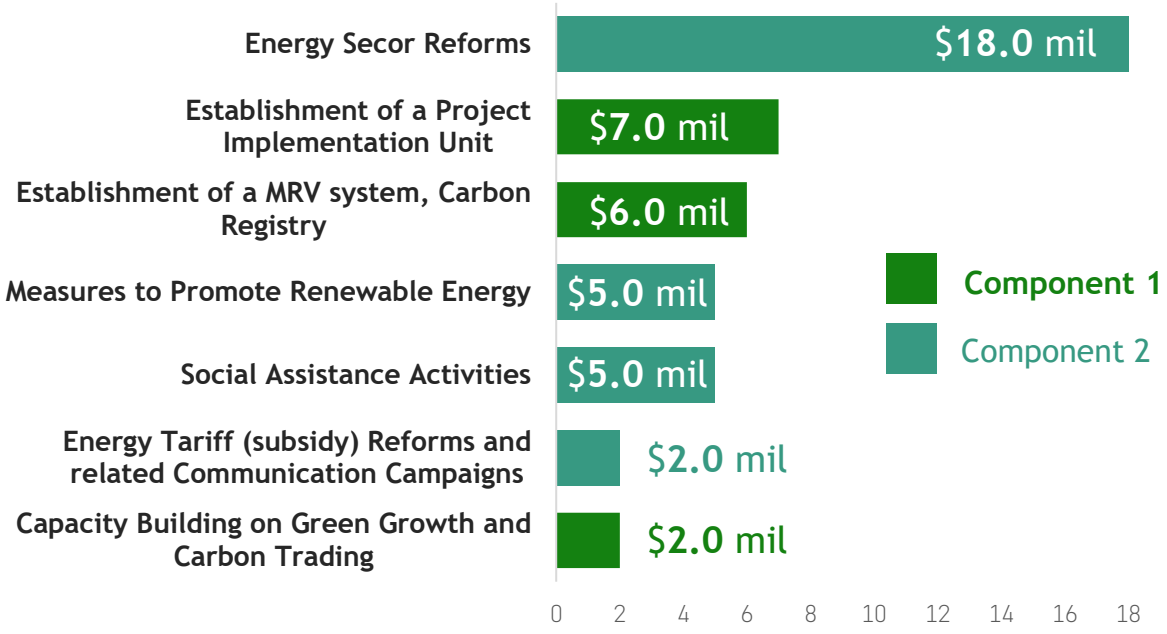
# iCRAFT Project with the World Bank

WORLD BANK GROUP

| iCRAFT Project Components: | Total Funding: US$ 46,25 million |
|---|---|
| Mitigation Outcomes Purchase Agreement | MOPA: US$ 25 million |
| Emissions Reduction Payment Agreement | ERPA: US$ 20 million |
| Adaptation Fund Allocation | US$ 1.25 million |

**Innovative Carbon Resource Application for Energy Transition (iCRAFT)** is the World Bank's first of its kind global policy crediting initiative. iCRAFT focuses policy measures to implement comprehensive energy sector reforms

## iCRAFT Funds Allocation by Components, in US$ million



# iCRAFT Project with the World Bank

## iCRAFT drives progress towards the Sustainable Development Goals (SDGs)

### Climate action

**People & businesses need a reliable, sustainable, and affordable supply of energy over the long term.**

**iCRAFT delivers:**

- Reduced GHG emissions
- Contributing to Nationally Determined Contributions (NDCs) under the Paris Agreement


### Energy security

**Climate change is an existential yet preventable risk to the world.**

**iCRAFT delivers:**

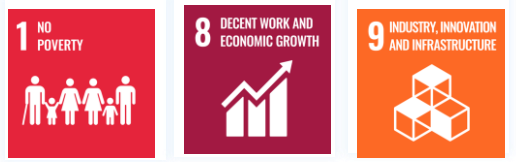
- More sustainable/efficient use of energy
- Reduced strain on energy systems (reducing blackouts)
- Mitigating risks of running out of fossil fuels


### Sustainable development

**With the right support, developing countries can grow their economies, develop economically, and mitigate emissions at the same time.**

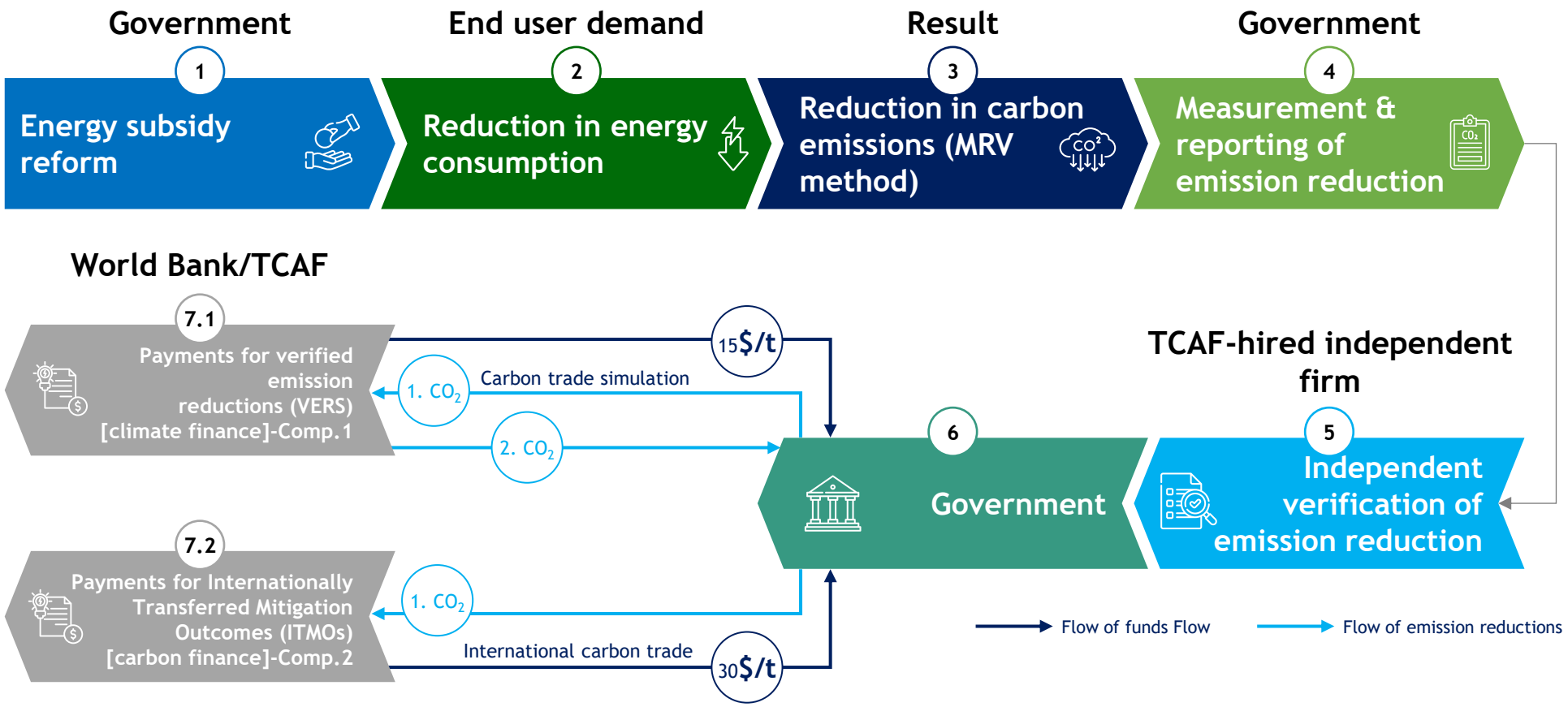
**iCRAFT delivers:**

- Savings from eliminating subsidies can be channeled to other anti-poverty initiatives and social protections
- Increased financing from carbon credits towards needed infrastructure and initiatives



# iCRAFT Project with the World Bank

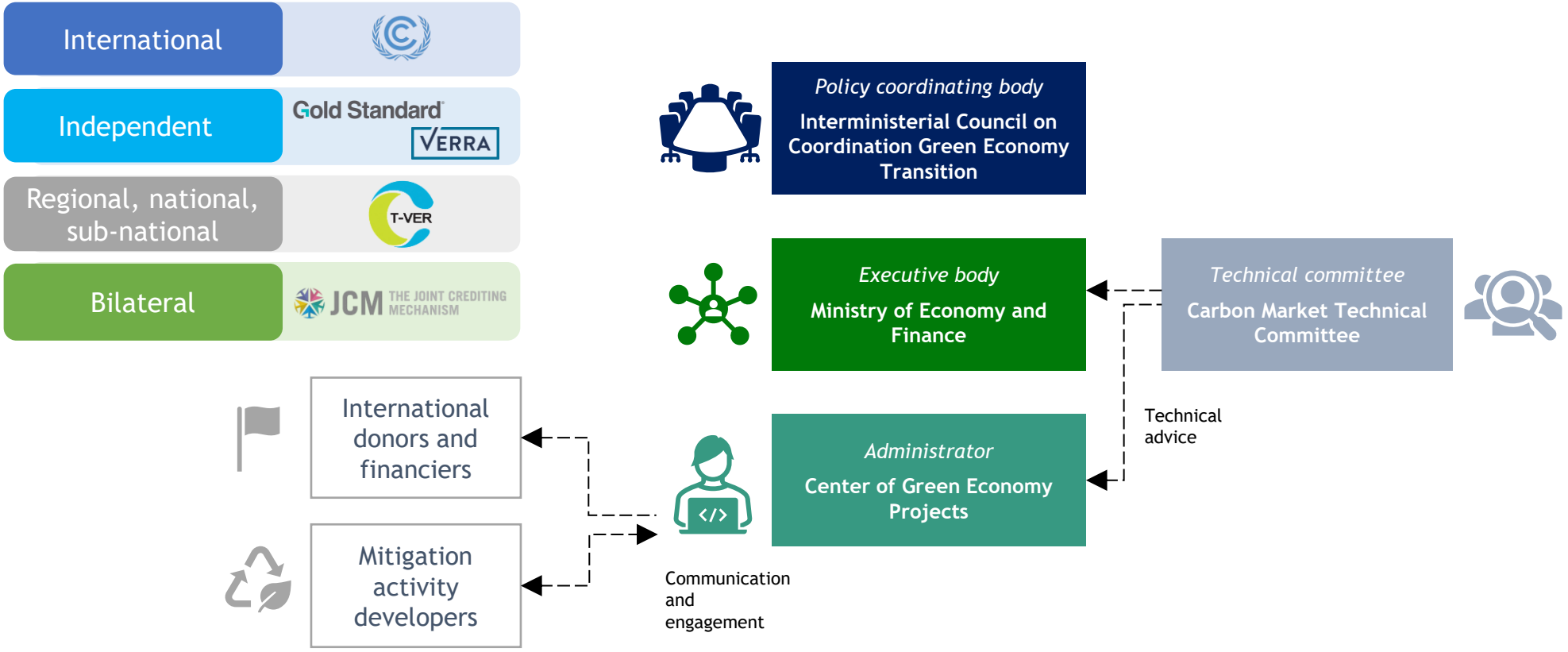
**iCRAFT's model aims to incentivize efficient and sustainable energy use as a result of energy subsidy/tariff reform.**



# Carbon Trading

**Carbon Trading** (or Carbon Credits/Units Trading) is a mechanism allowing the project developers (governments and companies) **to monetize** the reduced greenhouse gas emissions in a form of certificates and **to generate additional revenues** for the project or the budget.

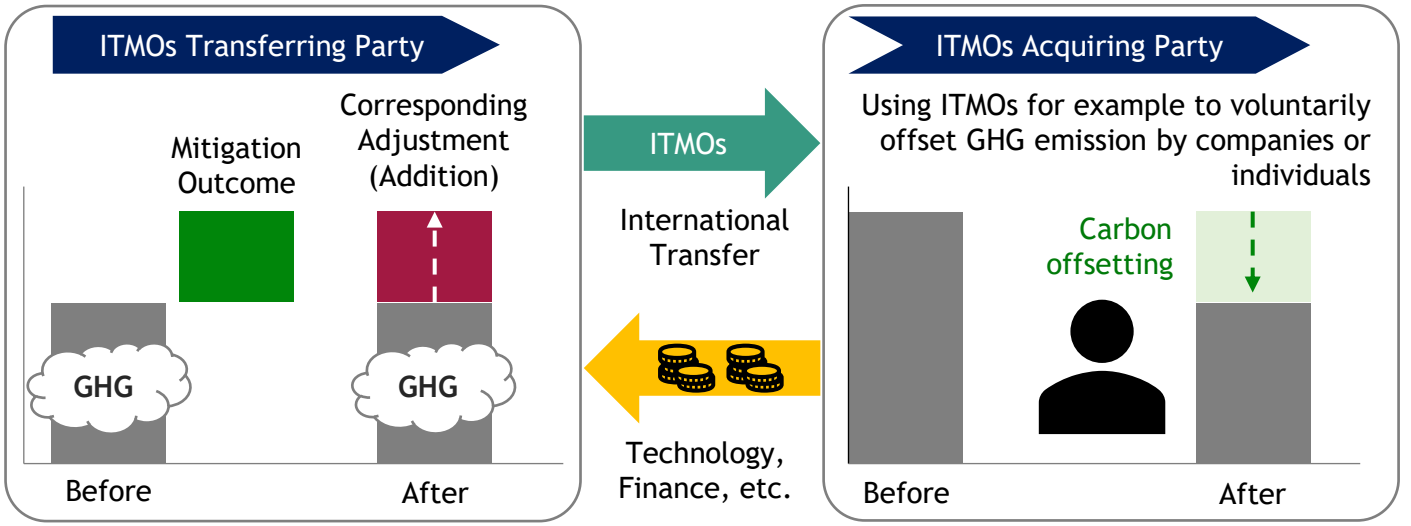
## Institutional structure for international carbon markets in Uzbekistan



# Carbon Trading

## Internationally Transferred Mitigation Outcomes (ITMO)

are a mechanism under the Paris Agreement that allows countries to transfer emission reduction or removal units between each other to help achieve their Nationally Determined Contribution (NDC) targets.

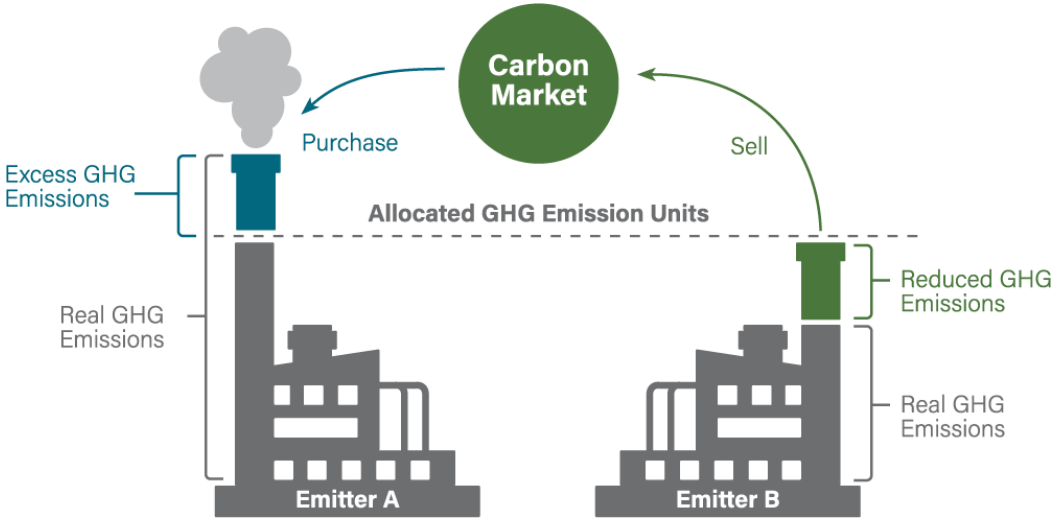



## Verified Emission Reductions (VER)

are carbon credits representing the reduction, avoidance, or removal of greenhouse gas emissions from a project, verified by independent third-party auditors.

## Emissions Trading Scheme (ETS)

also known as **cap-and-trade**, is a market-based approach to regulating greenhouse gas (GHG) emissions. It sets a limit (cap) on total emissions and allows organizations to trade emission allowances, promoting cost-effective emissions reductions.



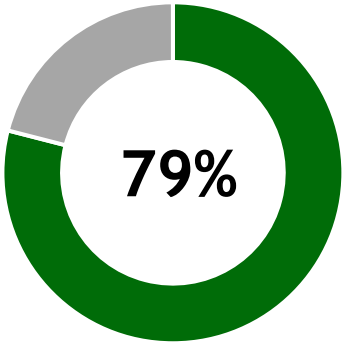
# Environmental, Social and Governance (ESG)

## The Need for ESG Ratings

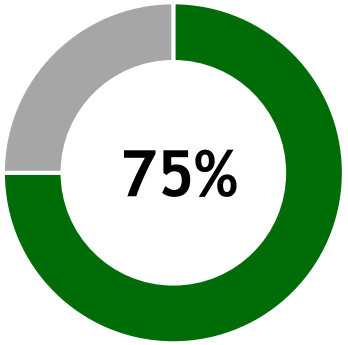
**ESG rating** is one of the important ways of interaction between companies and investors and all interested parties

Ratings enable companies to **confirm their achievements** and progress and to **compare them** with other organizations.

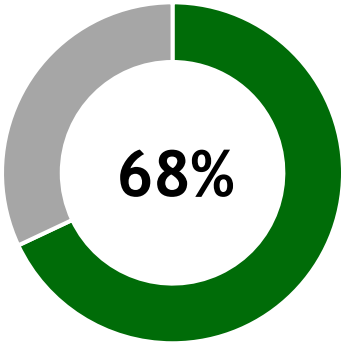
ESG risks are an important factor in **investment decisions**



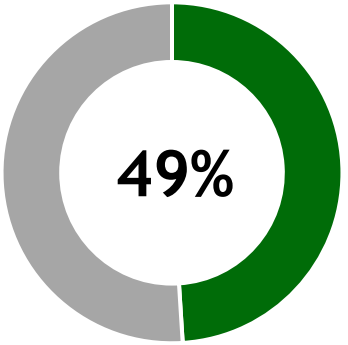

Companies should consider ESG issues even if it **reduces short-term economic benefits**




ESG performance metrics and targets should be reflected in **executives' compensation**




**Willing to stop funding** companies that do not take sufficient steps to address ESG issues

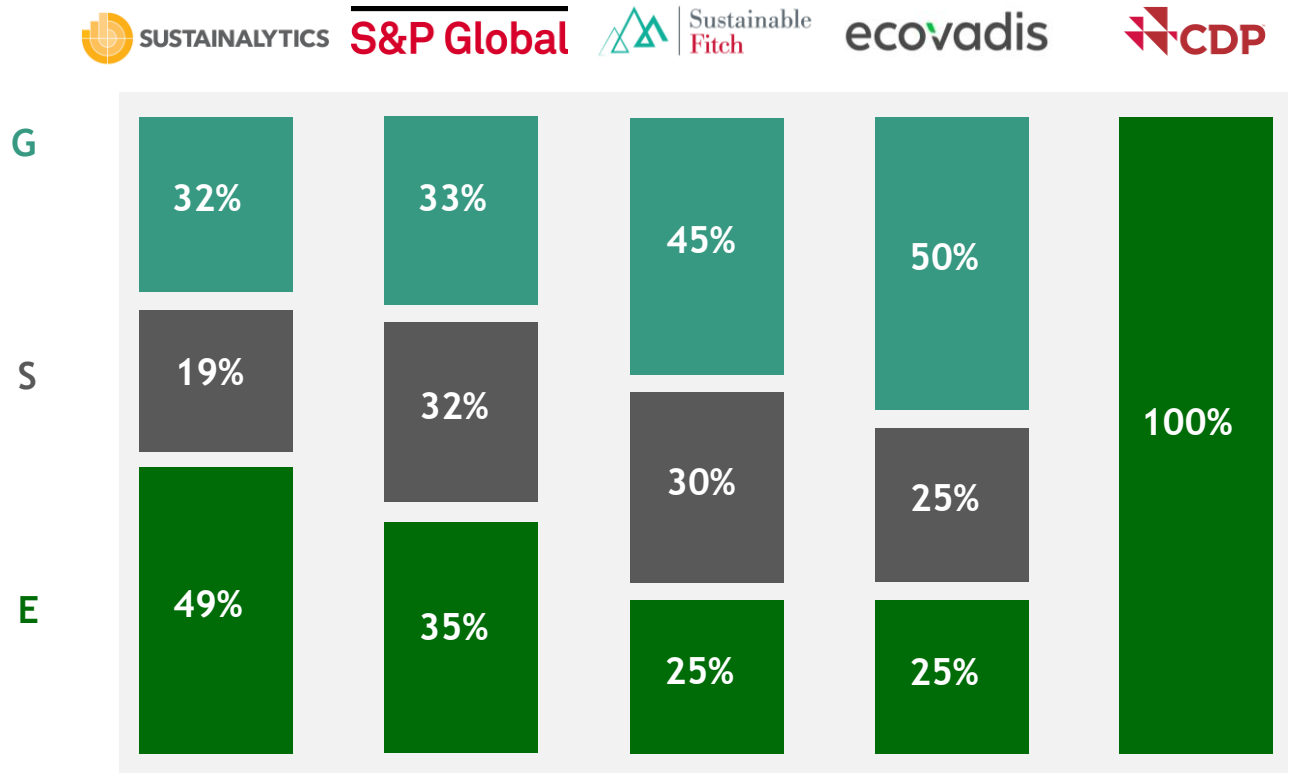



Source: PwC 2021 Global Investor Survey (325 investors surveyed)

# Environmental, Social and Governance (ESG)

## Weights of the E, S and G in different ESG ratings:

The Contribution of ESG Factors to the Metals Mining and Production Sector




* Rating assessments are largely based on ESG reporting, public data, media news and questionnaires that identify industry leaders and laggards.

### Governance:

- Board of Directors
- Risk-management
- Cyber-security
- Procurement

### Social:

- Occupational Health and Safety Policy
- Diversity
- Local Communities

### Environmental:

- Climate
- GHG Emissions
- Emissions and Discharges

# Environmental, Social and Governance (ESG)

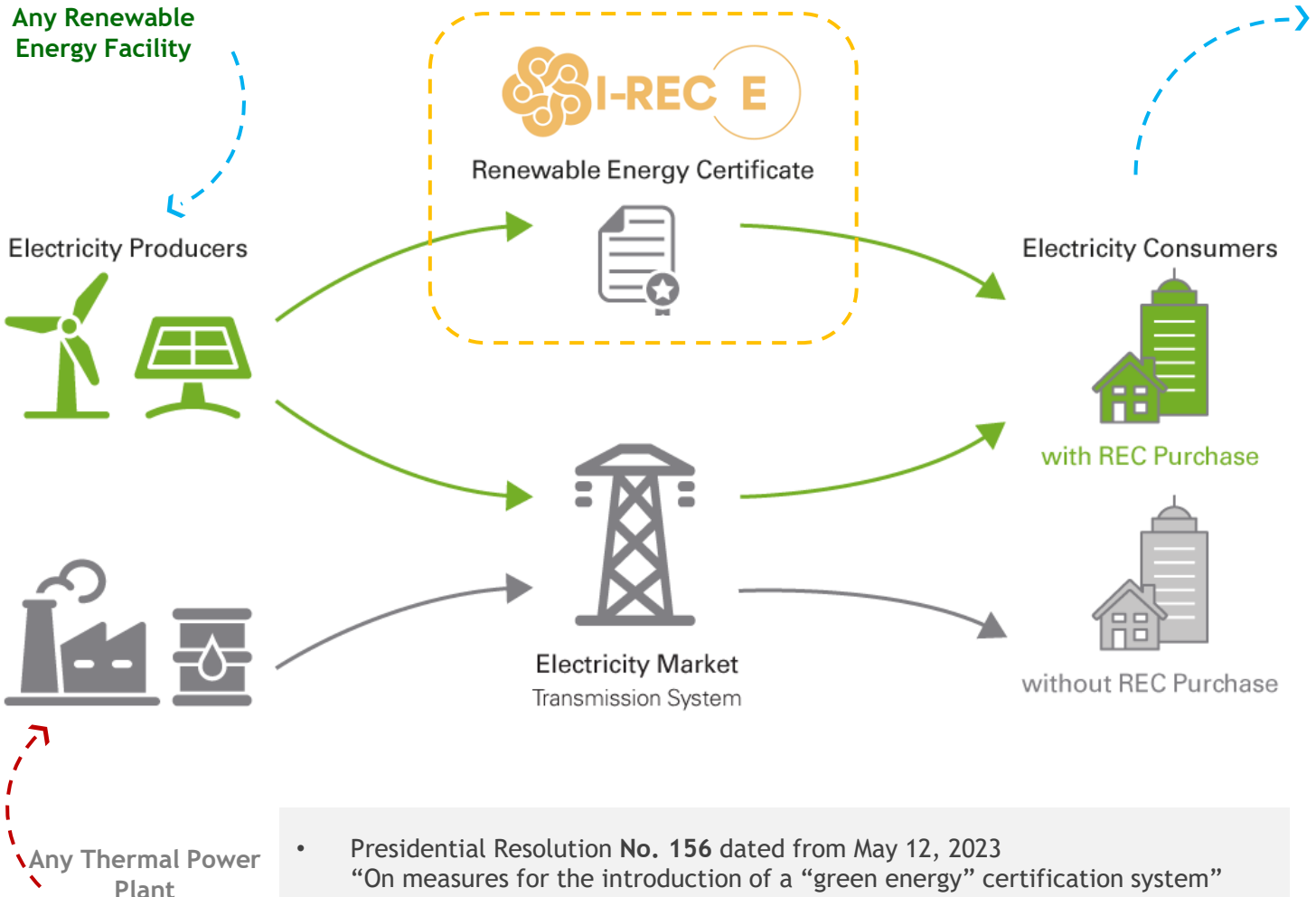
## Work on developing sustainable development practices:

Before initiating the receipt of an ESG rating, a company must ensure a systematic and conscious approach to sustainable development. ESG rating is a reflection of the maturity of processes within the company.

For a successful result, it is important to first: build an internal ESG management system, ensure the reliability and transparency of data, formulate strategic goals and demonstrate progress

| Corporate Governance | Strategy | ESG Practices | Reporting |
|---|---|---|---|
| • Development of **corporate governance practices** in accordance with best practices.<br>• **Integration of ESG issues** into the organizational management structure of the Company.<br>• **Integration of ESG risks** into the corporate governance and risk management system.<br>• Development and implementation of **missing policies** and **procedures** | • The ESG strategy must be approved at the **board of directors** or **management level**.<br>• It is important to have specific goals (**KPIs**), deadlines and **implementation plans**.<br>• Assessment of **climate risks** and adaptation of corporate strategy.<br>• Availability of goals and plans for reducing the **carbon footprint**. | • **Real cases of improvements** in the field of ecology, personnel management, social policy, etc.<br>• Reduction of **negative incidents** (spills, accidents, offenses).<br>• **Adaptation** and **mitigation** measures for climate risks.<br>• **Participation in climate** and **social initiatives** (e.g. CDP, UNGC, SBTi) | • **Transparency** and completeness of disclosure in accordance with international standards (GRI, SASB, ISSB, TCFD).<br>• **Data verification** by third-party audit increases trust on the part of rating agencies.<br>• Public availability of key **policies** and **documents.**<br>• Public availability of **metrics** and **indicators.** |

# Renewable Energy Certificates (I-REC(E))




- Presidential Resolution **No. 156** dated from May 12, 2023
  "On measures for the introduction of a "green energy" certification system"
- Cabinet of Ministers' Resolution **No. 515** dated from September 29, 2023
  "On measures to expand the implementation of "Green Energy" certificates and improve "green financing" mechanisms"

## Benefits:

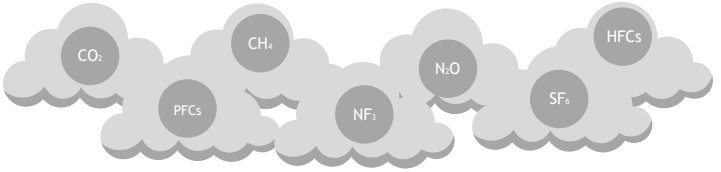
1. **Climate Goals:**
   I-RECs can help countries fulfill their climate commitments, such as those outlined in the Paris Agreement, by demonstrably reducing their carbon footprint.

2. **Carbon Footprint Reduction:**
   I-RECs allow companies to directly offset their energy-related emissions (Scope 2), contributing to their sustainability goals and reducing their environmental impact.

3. **Sustainability Reporting:**
   I-RECs provide verifiable data for sustainability reporting, demonstrating a commitment to green energy and showcasing environmental responsibility.

# Monitoring, Reporting and Verification (MRV)

Under the Paris Agreement, the MRV system—short for Measurement, Reporting, and Verification — is a framework established to track and assess the implementation of climate actions by countries, primarily in relation to their Nationally Determined Contributions (NDCs). It forms a key part of the Enhanced Transparency Framework (ETF) described in Article 13 of the Agreement.




**Measurement:**

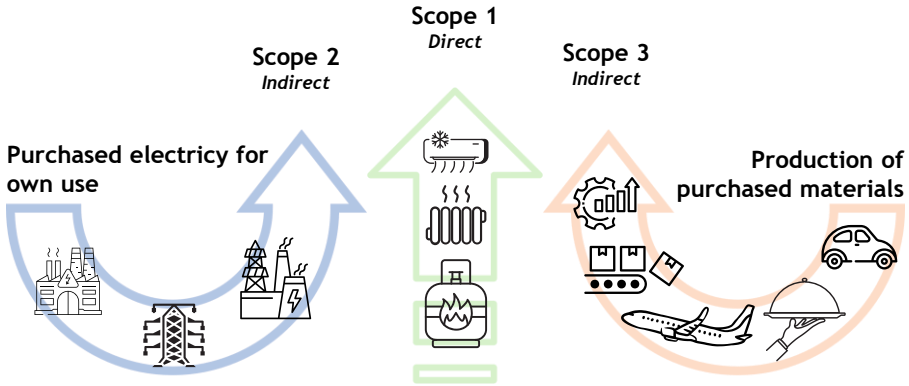
Countries measure their GHG emissions and progress toward climate goals using internationally agreed methodologies (e.g., IPCC Guidelines).

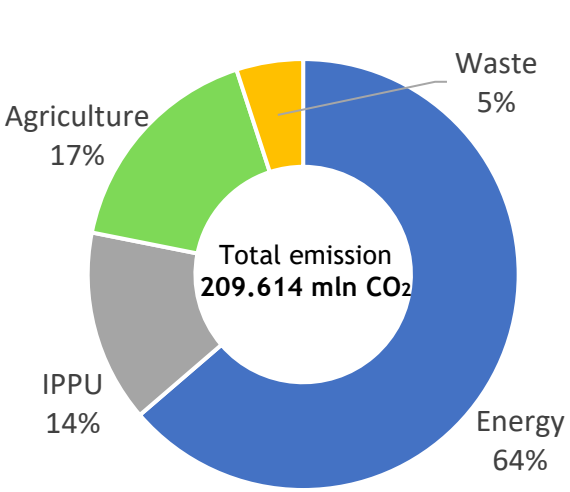
**Reporting:**

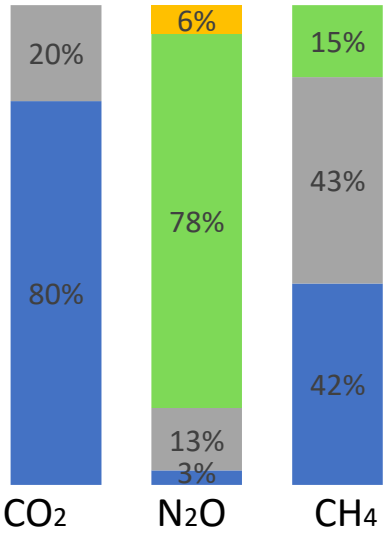
Countries submit Biennial Transparency Reports (BTRs), which include: GHG inventories, Information on progress toward NDCs, Climate adaptation actions, Support received and provided.

**Verification:**

Technical Expert Review (TER) for accuracy and completeness, Facilitative Multilateral Consideration of Progress (FMCP) to ensure accountability and build mutual trust.




The **Energy sector** is by far the largest contributor to **$CO_2$ emissions**, accounting for nearly 80%.

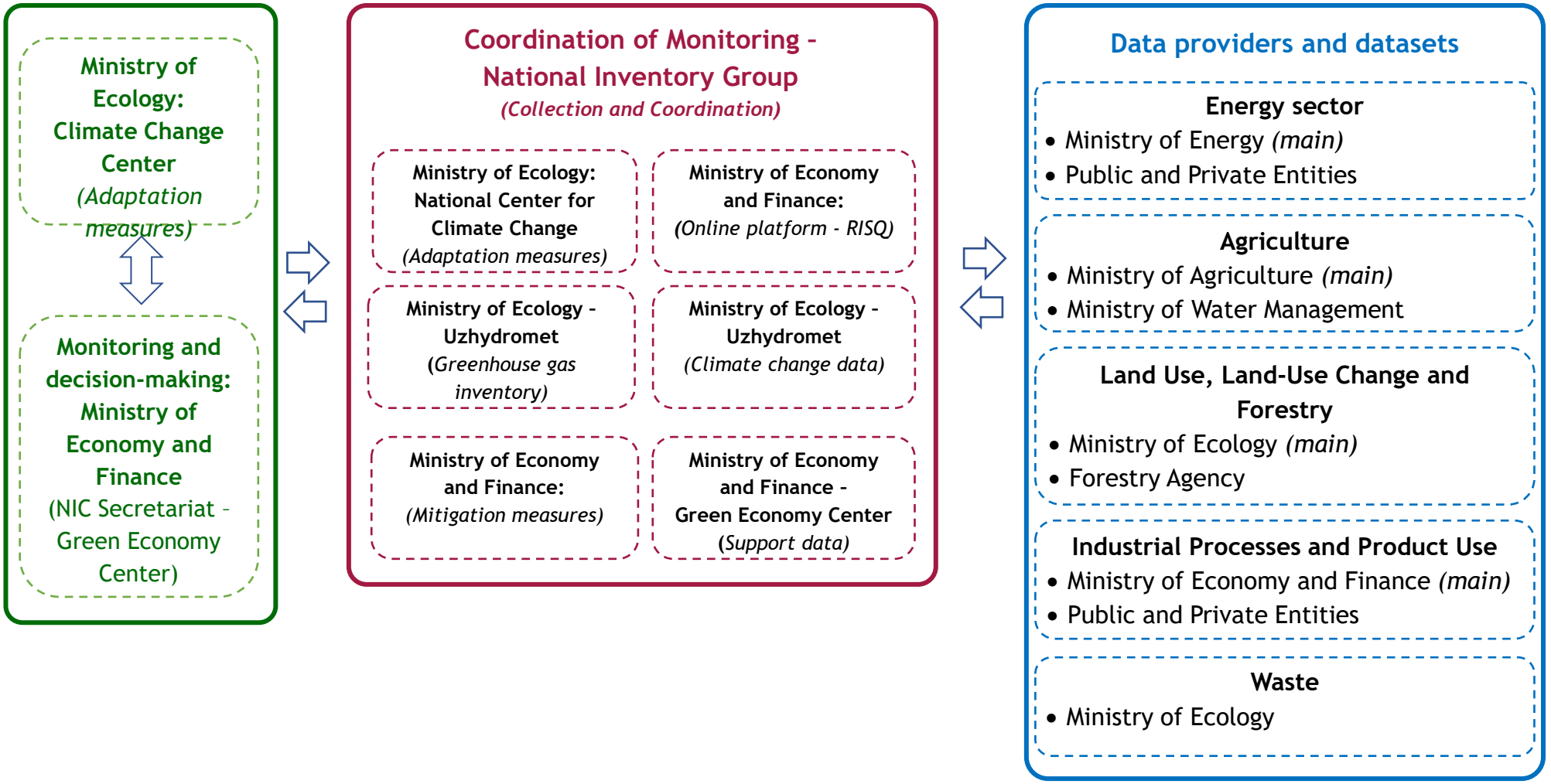
For **CH4 emissions**, sources are more diversified: the **Energy sector** and **Agriculture sector** contribute almost equally (around 42% each), followed by the **Waste sector** (16.1%).

**N2O emissions** are predominantly from the **Agriculture sector**, making up 77.9% of the total. The **IPPU sector** and **Waste sector** also contribute, but to a lesser extent.

**HFCs emissions** are exclusively linked to the **IPPU sector**, specifically from refrigerants used in air conditioning and refrigeration systems.

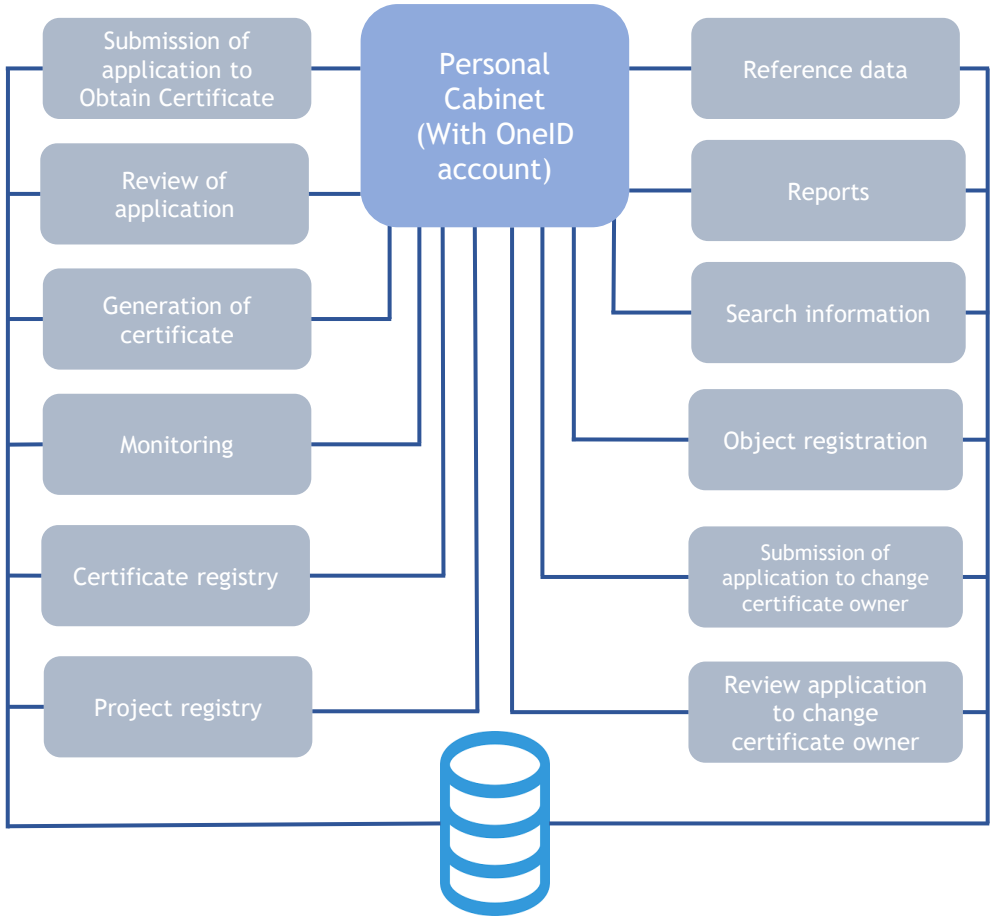
# Monitoring, Reporting and Verification (MRV)

## Structure of the National Transparency System (MRV)



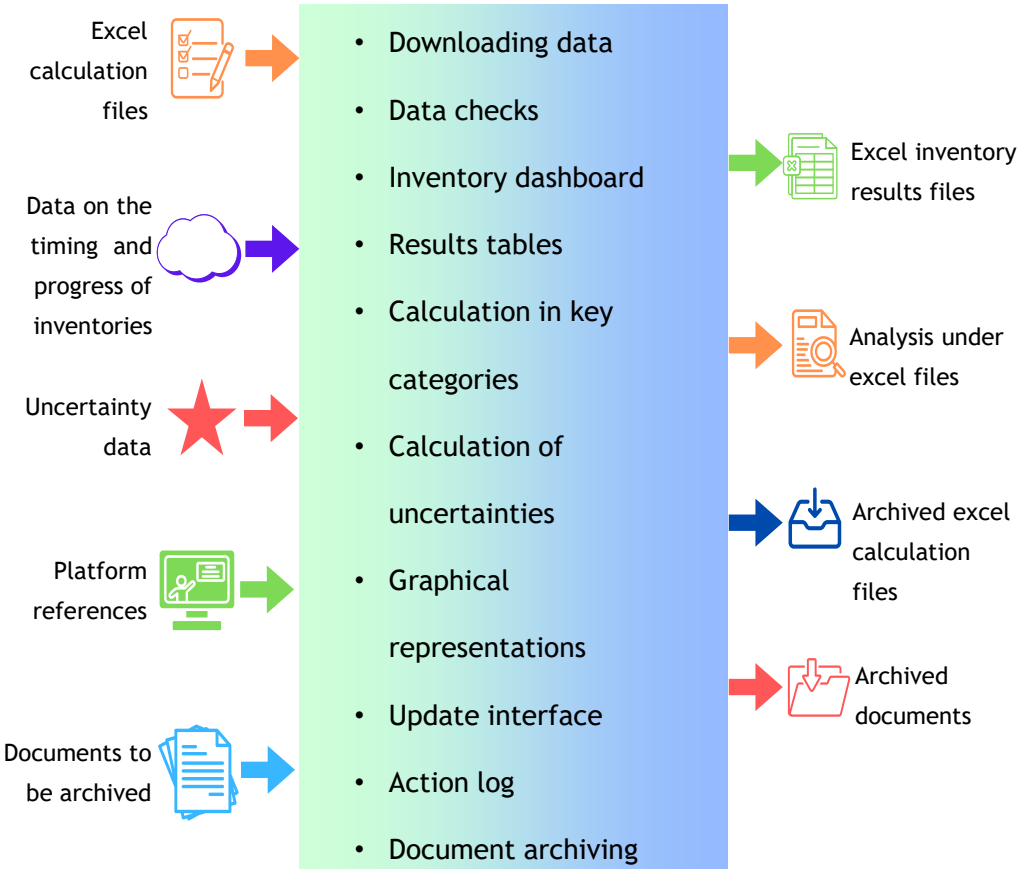
# Digitalisation Unit

## Green Economy Platform




*For more information: green.imv.uz*

## RISQ Platform




*For more information: risq-uz.citepa.org*

# International Cooperation

The iCRAFT Project's two tranches at $15 million transacted under ERPA from the Transformative Carbon Assets Facility of the World Bank. Overall 9.9 million $tCO_2eq.$ of GHG emissions reduced after the first wave of energy tariffs reform in Uzbekistan.

Based on the GHG Protocol, a methodological guide was developed to determine the volume of GHG indirectly generated from consumption of energy resources (Scope 2), as well as to calculate the volume of Scope 2 emissions by business entities.

The "RISQ" online platform was launched to enhance the Measurement, Reporting and Verification (MRV) system in cooperation with the Agence Française de Développement (AFD) and Citepa.

Joint Crediting Mechanism (JCM) is being launched in bilateral cooperation with the Government of Japan. Under the JCM up to 50% of project costs could be compensated when GHG Emissions reduced.

The draft of Terms of Reference of the web-based "Green Economy Platform" was developed in cooperation with the GIZ.

4 hydro-power plants (total capacity: 962 MW) of the JSC "UzHydroEnergy" registered in the Evident platform & more than 90 000 I-RECs were issued in 2024-2025.

The Republican Emission Trading Scheme (ETS) and Carbon Tax are being evaluated for implementation in Uzbekistan.

# Thank you!

Please, download the Presentation via the QR-code