

ICAT Kyrgyzstan Project

Report on Deliverable 17



Ministry of Natural Resources,
Ecology and Technical Supervision
of the Kyrgyz Republic



Initiative for Climate Action Transparency – ICAT

Deliverable 17: Report summarizing lessons learned and key achievements of the project

AUTHOR

Aleksandr Temirbekov

National Expert Group Leader, Ministry of Natural Resources, Ecology and Technical Supervision of the Kyrgyz Republic

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Acronyms

BAU	Business As Usual scenario
BTR	Biannual Transparency Report
GACMO	Greenhouse Gas Abatement Cost Model
GHG	Greenhouse Gases
GSP CBIT	Global Support Programme Capacity Building Initiative for Transparency
HPP	Hydro Power Plant
ICAT	Initiative for Climate Action Transparency
MNRETS	Ministry of Natural Resources, Ecology and Technical Supervision
MRV	Measurement Reporting and Verification
NDC	Nationally Determined Contribution to Paris Agreement
NGHGI	National GHG Inventory
RES	Renewable energy sources
SPP	Solar Power Plant
TOR	Terms of Reference
UNEP CCC	United Nations Environment Programme Copenhagen Climate Centre
UNFCCC	United Nation Convention on Climate Change

Introduction

The Initiative on Transparency of Climate Action and Support (ICAT) was established in 2015 at the Conference of the Parties to the United Nations Framework Convention on Climate Change in Paris to support the implementation of Article 13 of the Enhanced Framework for Transparency of Climate Action and Support of the Paris Agreement.

ICAT is a non-legal entity, a multi-stakeholder partnership led by a Donor Steering Committee (DSC), comprising Austria, Canada, Germany, Italy, Ireland, and the Children's Investment Fund (CIFF), as well as the UNFCCC Secretariat as the specialized UN body responsible for climate change policy, and UNOPS as a member of the Management Committee. Within UNOPS, the ICAT Secretariat manages the initiative's day-to-day operations, coordinating and guiding the work of implementing partners. ICAT currently works with over 40 developing countries.

Projects supported by ICAT concern the creation or enhancement of a framework for climate change mitigation; the development of an approach to monitoring and evaluating adaptation; and the creation or enhancement of a system for tracking progress in implementing Nationally Determined Contributions (NDCs).¹; assessing the impact of climate policy; estimating or improving projections of future greenhouse gas (GHG) emissions; integrating and/or aggregating climate actions at the subnational level and for non-state actors; establishing a tracking system for just transition processes; establishing or enhancing the effectiveness of climate data systems; and tracking systems for climate finance.

In the Kyrgyz Republic, ICAT supported the country's initiative to track NDC implementation and achieve carbon neutrality, following a request from the Ministry of Natural Resources, Environment, and Technical Supervision to enhance national capacity. A corresponding project was developed, implemented by the Copenhagen Climate Centre of the United Nations Environment Programme (UNEP).

As part of this cooperation, Kyrgyzstan is receiving support in developing tools and relevant frameworks tailored to the country's specific circumstances for measuring and predicting the desired impact of climate actions outlined in its NDCs on greenhouse gas emissions. The country is expected to thereby improve its monitoring, tracking, and reporting mechanisms for implementing its NDCs and achieving its climate goals, thereby helping it meet the requirements of the Enhanced Transparency Framework under Article 13 of the Paris Agreement. In line with the country's sectoral priorities, the ICAT project focused on the energy and transport sectors.

The overall goal of the project aims to support the Kyrgyz Republic in planning, measuring, managing, and tracking the implementation of climate change mitigation actions within the NDC and the expected GHG impacts by creating a framework for projecting emissions through individual activities, impact assessments, and regular data collection, tracking, and management within the NDC. This includes projecting GHG

¹Voluntary commitments of countries, including Kyrgyzstan, under the Paris Agreement of the UNFCCC

emissions/removals, assessing the impact of relevant policies and measures, and developing appropriate indicators for reporting on progress.

As a result of the project implementation, the following outcomes and outputs were planned to be developed in the Kyrgyz Republic:

- **Outcome 1: A Framework for projections of emissions and key NDC tracking indicators in the selected sectors is developed and implemented**
 - Output 1.1 Inception phase performed
 - Output 1.2 Modelling tool(s) for the selected sectors are identified and training has been provided
 - Output 1.3 Data collection and processing to prepare projection of GHG emissions for the selected sectors
- **Outcome 2: The impacts of the selected policies and measures have been assessed**
 - Output 2.1 GHG Impact assessment of mitigation policies and measures in selected sectors
- **Outcome 3: NDC tracking framework for the selected sectors has been developed**
 - Output 3.1 Development of NDC tracking indicators for selected sectors

For such kind of support globally, ICAT has developed, and collaborated with partners to roll-out, a suite of practical, open-source tools and methodologies to provide effective support to the transparency efforts of countries around the world. The toolbox package includes the following:

1. Policy Impact Assessment
2. NDC Tracking & Projections
3. Data Management & Reporting
4. Sustainable Development & Just Transitions
5. Transformational Change
6. Adaptation & Loss and Damage
7. Climate Finance & Article 6
8. Subnational and Non-State Actions

The first two ICAT tools tailored for the Energy and Transport sectors were presented to the national stakeholders of Kyrgyzstan on two trainings 1) on GACMO and NDA Tracking and 2) on Mitigation Policy & Measures effects assessment.

This is Deliverable 17 Report by the National Lead Expert, summarizing lessons learned and key achievements of the project in line with the Consultant's - UNOPS Contract TOR assigned for the project reporting period.

1. Deliverable 17 Report summarizing lessons learned and key achievements of the project

1.1 OVERVIEW OF PROJECT RESULTS AND PROGRESS

The ICAT Kyrgyzstan project achieved meaningful progress in strengthening national systems for climate transparency, data governance, scenario modelling, policy assessment and NDC tracking.

Drawing from the project deliverables and associated workshops, key achievements include the following:

1.1.1 Stocktaking and Diagnostic Assessment for Kyrgyzstan's Energy and Transport Sectors

The undertaken stocktaking exercise and corresponding Diagnostic Report on targeted sectors has determined:

- 1) The current status of data collection, data sources, what institutional arrangements are relevant, and key priorities for:
 - a. the MRV system,
 - b. projections and
 - c. NDC tracking in the selected sectors.
- 2) Needs and gaps for effective compilation of the national inventory reports for the selected sectors.

They also provided the first integrated assessment combining the energy and transport sectors, identifying emissions trends, mitigation opportunities, and institutional weaknesses across the data value chain. Major achievements include:

- Establishment of a clear baseline of Kyrgyzstan's GHG emissions profile from 1990–2023.
- Identification of priority mitigation actions aligned with NDC 2.0|3.0 commitments.
- Mapping of institutional roles and data flows across MNRETS, ME, MTC and other actors.
- Highlighting data gaps, methodological inconsistencies, and QA/QC deficiencies that slow down transparent reporting.

1.1.2 Modelling tool for the selected sectors is identified and training has been provided

One of the main achievements of the project is the introduction of a modelling tool. For this an in-person two-days training workshops has been conducted involving main specialists of the governmental institutions and national experts. The event has been moderated by the international consultant from UNEP CCC Ms. Aiymgul Kerimray. The key achievements of the event discussions and exercises included the following

- Various projection modelling tools, including their scope and functionality in the national context were presented and discussed.
- GACMO tool was selected as the modelling tool that is most appropriate in the national context of Kyrgyzstan
- Introduction of quantitative scenario modelling to renewable energy projects.

1.1.3 Data collection and processing to prepare projections of GHG emissions for the selected sectors

The process of reviewing current data and collecting additional data to develop Energy and Transport sectoral projections using the selected modelling tool, resulted in compilation of a full data series needed to calculate GHG projections on BAU (without measures) scenario, which can be considered as a good achievement. Other key achievements here include the following:

- Identified gaps in data, data management, institutional arrangements and informational sources.
- Recommendations for data collection and management improvement.
- Identified policies and measures in the targeted sectors to develop a 'with measures' and 'with additional measures' scenarios projections.
- Developed projections of GHG emissions.
- Documented methodology for developing projection(s) of GHG emissions.

1.1.4 GHG Impact assessment of mitigation policies and measures in selected sectors

This is the most controversial ICAT project activity that was recognized as "needed further elaboration", though a Training Workshop on the Assessments of the policy impacts on GHG emissions / removals, using selected ICAT methodologies (Renewable Energy, Transport Pricing) has been conducted by UNEP CCC international consultants Ms. Aiymgul Kerimray and Mr Subash Dkhar, to build scenarios, including

- a) Identification of policies for assessment;
- b) Development of causal chains for each policy;
- c) Identification with and without policy scenarios for evaluation of GHG impacts;
- d) Quantification of policy impacts;
- e) Identification of policy impact indicators and development of technical guidance for tracking them.

However, as all the participants agree one training and exercises are not enough to deploy the methodology and to introduce it into the practical use. Though national experts in Energy and Transport developed reports of methods, data used, and results of policy impact assessment and also recommendations for including indicators into the NDC Tracking Framework, this methodology on mitigation policies impact assessment still need to be further elaborated to a wider use.

1.1.5 Arrangements for NDC tracking framework

This is the most feasible achievement for the Energy and Transport sectors NDC tracking framework. Both sectors finalized the indicator set and parameters and integrate them into the current NDC tracking framework by means of additionally developed data exchange protocols, and corresponding templates development.

The corresponding roles of the sectoral stakeholders' institutions for NDC tracking frames and data flux have been debated and identified.

This was especially important, since in the beginning of this year, the Cabinet of Minister of Kyrgyzstan has endorsed the Regulations on the National System of GHG Inventory, Monitoring, Reporting, Verification and Circulation of Carbon Units in the Kyrgyz Republic (Decree as of 24th February 2026, #133).

Evidently, it will further strengthen for legal grounds for NDC tracking as part of the national MRV system using developed by ICAT project indicators for the Energy and Transport sectors.

Moreover, the ICAT training on ETF online reporting tool devotes to NDC progress has fostered the national technical capacities on CTF reporting tables templates across the targeted sectors.

1.1.6 Strengthening of National Capacity Through Workshops, Trainings and Knowledge Transfer

Across the ICAT project period, including inception, modelling, NDC tracking template development and policy assessment workshops, substantial capacity gains were achieved:

- Training of stakeholders in GACMO, scenario modelling and NDC tracking frames and tools.
- Improved understanding of policy impact assessment using ICAT methodologies.
- Strengthened interagency collaboration through frequent project events on data flow and sharing.
- Creation of a common understanding on energy data challenges and institutional coordination needs.

1.1.7 Consolidation of Stakeholder Engagement and National Ownership

All the conducted so far ICAT project events confirmed strong national ownership of ICAT outputs, demonstrated by:

- Wide participation from MNRETS, ME, MTC, Bishkek City Hall, NGO and private sector and development partners.
- Consensus on the credibility and applicability of the deliverables.
- Alignment of ICAT outputs with national processes such as BTR, NC, Implementation Plan of the Concept for Carbon Neutrality Achievement and NDC 2.0 and 3.0 implementation.

1.1.8 General Comment

Collectively, these achievements position Kyrgyzstan to better fulfil ETF requirements, enhance national transparency systems, and integrate climate data into policy design and tracking.

1.2 LESSONS LEARNT

The key lessons emerging from this process are summarised under four thematic areas that collectively capture the technical, institutional, and systemic insights gained during the workshop.

1.2.1 Strengthening Kyrgyzstan's Climate Transparency Architecture

This theme captures lessons relating to the need for a coordinated, robust national system for GHG reporting, NDC tracking, and ETF compliance.

Key lessons:

- Strong national demand exists for a coherent transparency framework that supports annual GHG tracking, policy assessment, and multi-year reporting cycles.
- The ICAT project was recognised as a catalyst for strengthening national transparency systems.
- Validation is an iterative process, not a single event MRV systems must be updated continuously as assumptions, data, and technologies evolve.
- Consensus exists that ICAT deliverables fill critical transparency gaps and are aligned with ETF requirements.
- Stakeholders emphasised the need for a long-term institutionalisation strategy for national MRV, including legal and policy support.

1.2.2 Data Systems, Quality Assurance and Institutional Coordination

This theme consolidates lessons on data availability, interoperability, institutional mandates, and governance of the transparency system.

Key Lessons:

- Data availability remains the largest constraint across sectors: datasets are fragmented, incomplete, and not harmonized by sources and not updated.
- QA/QC systems are not formally established, contributing to inconsistent and sometimes unverifiable reporting.
- Institutional mandates for climate data collection and sharing are unclear, resulting in project-based reporting.
- Stakeholders highlighted the need for a centralised coordinating entity for climate data management and coordinated use.
- Legally supported data-sharing protocols, standardised metadata templates, and clear focal points are essential for long-term sustainability.
- Improved collaboration and structured coordination were recognised as crucial for addressing systemic data challenges.

1.2.3 Technical Capacity, Modelling, and Policy Impact Assessment

This theme captures lessons on Kyrgyzstan's technical readiness, capacity gaps, modelling needs, and use of ICAT methodologies.

Key Lessons:

- Technical capacity for modelling (GACMO, analytics) and policy impact assessment is still limited to a few individuals, creating institutional vulnerability.
- Continuous capacity building is needed to ensure national ownership of modelling and policy evaluation.
- Scenario assumptions must be co-developed with all the national experts, particularly for emerging technologies, grid emission factors, and local cost curves.
- Policy impact results, scenario modelling outputs, and QA/QC findings must be integrated directly into NDC tracking and MRV architecture.
- Modelling tools must be continuously adapted to local data and parameters, context, and evolving policy realities, such as green hydrogen developments.

1.2.4 Stakeholder Engagement, and National Ownership

This theme combines lessons on inclusive participation, and the behavioural and cultural aspects of MRV system development.

Core Lessons:

- Climate actions must show co-benefits beyond GHG reductions including jobs, gender, water, land, and socio-economic impacts.
- Inclusiveness indicators require baseline data, methodological refinement, and integration into sector planning tools.
- Early engagement of stakeholders enhances credibility, transparency of assumptions, and cross-sector trust.
- Participatory processes help uncover hidden data gaps, harmonise assumptions, and improve institutional memory.
- Strong national ownership was demonstrated, with institutions expressing readiness to adopt and integrate ICAT outputs into national systems.
- Collaboration, dialogue, and transparency are central to sustaining Kyrgyzstan's climate governance.

1.3 CONCLUSION

Totally eight events have been conducted by the ICAT project on Kyrgyzstan, building technical capacities of the participated stakeholders engaged into NDC tracking.

Table 1. ICAT Kyrgyzstan project event

#	Events	Number of Participants	Gender	
			F	M
1	Inception workshop on stocktaking and diagnosis	26	14	12
2	Training workshop of GACMO modelling tool	26	14	12
3	Validation workshop on GHG emissions projections in targeted sectors	12	6	6
4	Training webinar on the assessment of mitigation policies and measures impacts on GHG emissions	18	8	10
5	Validation workshop on the outputs of the targeted sectors mitigation policies and measures assessment	18	9	9
6	Traning workshop on NDC progress tracking tool (CTF tables)	26	14	12
7	Validation workshop on NDC tracking indicators in targeted sectors	21	14	7
8	Final validation workshop on the ICAT projects results	30	17	13
Total		177	96	81
Total, %		100	54	46

Eighteen deliverables fixed by the ICAT Project Implementation Plan have been developed and verified by the international consultants from UNEP CCC.

Table 2. ICAT Project Reported Deliverables by national consultants

Deliverables	AT ²	EB ³	RB ⁴
Deliverable 1: Diagnosis report on the sectors analysis	+	+	+
Deliverable 2: Inception workshop and report	+		
Deliverable 3: ICAT Project Detailed Implementation Plan	+		
Deliverable 4: Hands-on Training Workshop on GACMO modelling tool for targeted sectors and the report	+		
Deliverable 5: Reports on the GHG emissions projections in the targeted sectors using GACMO		+	+
Deliverable 6: Reports on methodology of GHG emissions projections for the targeted sectors using GACMO		+	+
Deliverable 7: Validation Workshop on the GHG emissions projections for the targeted sectors and the report	+		
Deliverable 8.0: Training Webinar on the assessment of the mitigation policies and measures impacts on GHG emissions in the targeted sectors and the report	+	+	+
Deliverable 8.1: Reports on the assessment of the mitigation policies and measures impacts on GHG emissions in the targeted sector (for NDC 2.0) using GACMO		+	+
Deliverable 9: Validation Workshop on the assessment of the mitigation policies and measures impacts on GHG emissions in the targeted sector (for NDC 2.0) using GACMO	+	+	
Deliverable 10: Report on NDC tracking indicators и data gaps in the targeted sectors		+	+
Deliverable 11: Report on the selection process and its results on the NDC tracking tool in the target sectors		+	+
Deliverable 12: Training Workshop on ETF reporting tool on NDC progress (12 CTF tables), and the report	+		
Deliverable 13: Report on description of the requirements on data and parameters for the NDC Tracking tool	+		
Deliverable 14: Report on indicators for NDC tracking	+	+	+
Результат 15: Validation Workshop on Indicators for NDC Tracking in the selected sectors and the report	+		
Deliverable 16: Report on the general systems of institutional arrangements for NDC tracking	+		
Deliverable 17: Report, summarizing lessons learnt and key achievements of the project	+		
Deliverable 18: Validation Workshop on the project achievement with the participants' comments and recommendations	+		

All the achievements and lessons learnt mentioned above will be presented on the final validation workshop.

² Aleksandr Temirbekov, Lead Expert

³ Edilbek Bogombaev, Energy Expert

⁴ Rajab Baialiev, Transport Expert