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FINAL EVALUATION OF THE "SUPPORT THE PLATFORM FOR POLICY DIALOGUE AND COOPERATION BETWEEN EU AND CHINA ON EMISSION TRADING" PROJECT

Final Report

May 2021

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Glossary of Acronyms

ADB	Asian Development Bank
AVR	Accreditation and Verification Regulation, European Union
BMU	Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit (German Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety)
BPMR	Business Partnership for Market Readiness
bn	Billion
CA	Contracting Authority
CCD	Climate Change Department of the MEE, China
CCER	Chinese Certified Emission Reduction
CCfD	Carbon Contracts for Difference
CCUS	Carbon Capture Use and Storage
CERS	China Energy Research Society
CFB	Circulating Fluidised Bed
CIFF	Children's Investment Fund Foundation
CLC	Consortium Lead Company
CN ETS	Nationwide Chinese Emission Trading System
CO_2	Carbon Dioxide
DAC	Development Assistance Committee
DG CLIMA	Directorate General for Climate Action, European Commission
DG DEVCO	Directorate General for Development Cooperation
EC	European Commission
EC2	Europe China Clean Energy Centre
ECPPD	EU-China Platform for Policy Dialogue on Emission Trading
ECECP	EU-China Energy Cooperation Platform
EDF	Environmental Defense Fund
EEA	European Economic Area
EEAS	European External Action Service, European Union
EPB	Environmental Protection Bureau
EQ	Evaluation Question
ERI	Energy Research Institute
ET	Evaluation Team
ETS	Emission Trading System
ETTs	Emission Training Trainers
EU	European Union
EUCITP	EU-China Conference Interpreter Training Programme
EUD	European Union Delegation
EUR	Euro
FGD	Focus Group Discussions
FPI	Service for Foreign Policy Instruments, European Commission
G&I	Gender & Inclusion
GBP	Great Britain Pound
GDP	Gross Domestic Product
GESI	Gender Equality and Social Inclusion
GEWE	Gender Equality and Women's Empowerment
GHG	Greenhouse Gas
GIZ	Gesellschaft für Internationale Zusammenarbeit
GPRD	General Data Protection Regulation
GRCF	Green Recovery Challenge Fund
GW	Gigawatt
ICARE	Institute for Clean and Renewable Energy

ICT	Information and Communication Technology
IEA	International Energy Agency
IETA	International Emissions Trading Association
IFI	International Financial Institution
INDC	Intended Nationally Determined Contribution
IPCC	Intergovernmental Panel on Climate Change
JR	Joint Research
KE	Key Expert
KII	Key Informant Interviews
kWh_{el}	Kilowatt hour electric
LIM	Lead Implementing Member
LNOB	Leave No-One Behind
m	Million
M&E	Monitoring and Evaluation
MDB	Multilateral Development Bank
MEE	Ministry of Ecology and Environment, China
MOA	Ministry of Agriculture
MOE	Ministry for the Environment
MOFCOM	Ministry of Commerce
MOHURD	Ministry of Housing and Urban Rural Development
MOST	Ministry of Science and Technology
MoU	Memorandum of Understandings
MRR	Monitoring and Reporting Regulation, European Union
MRV	Monitoring, Reporting and Verification
MS	Microsoft
MSR	Market Stability Reserve
NAMA	Nationally Appropriate Mitigation Action
NCE	No-Cost Extension
NCSC	National Centre of Climate Strategy and International Cooperation
NDC	Nationally Determined Contributions
NDRC	National Development and Reform Commission, China
NEA	National Energy Administration, China
NKE	Non-Key Expert
OECD	Organization for Economic Co-operation and Development
PMI	Partnership for Market Implementation
PMR	Partnership for Market Readiness
PRDC	Provincial Development and Reform Commission
PSC	Project Steering Committee
PT	Project Team
QA	Quality Assurance
QC	Quality Controller
R&D	Research and Development
RBA	Rights-Based Approach
RED	Renewable Energy Development
REDD+	Reducing Emissions from Deforestation and Forest Degradation
SDG	Sustainable Development Goals
SGM	Sexual and Gender Minorities
SO_2	Sulphur dioxide
SOE	State-owned Enterprise
TL	Team Leader
TNA	Technology Needs Assessment
ToC	Theory of Change
ToR	Terms of Reference

ToT	Training of Trainers
UK	United Kingdom
UK PACT	UK Partnership for Accelerated Climate Transitions
UNCED	United Nations Conference on Environment and Development
UNFCCC	United Nations Framework Convention on Climate Change
US	United States (of America)
USD	US Dollar
VfM	Value for Money
WED	Wind Energy Development
WHO	World Health Organisation
WP	Work Plan

Executive Summary

Introduction

The EPRD-led consortium has been selected by the EU Delegation (EUD) in China with two evaluators for the final evaluation of the project "Platform for Policy Dialogue and Cooperation between EU and China on Emission Trading" (hereinafter also called EU-China Emission Trading System (ETS) project or programme). The evaluated Action has a budget of about EUR 10 million, it started in October 2017 and it is due to be completed by June 2021. The programme is the follow-up of the programme from 2013-2017 supporting emission trading in China, which was funded by the European Commission (EC) Directorate General for Development Cooperation (DG DEVCO). The initial political counterpart of the current project in China was the National Development and Reform Commission (NDRC). In 2018, the Chinese government was restructured and climate change-related policies were transferred to the Ministry of Ecology and Environment (MEE). The project contractors are led by ICF Consulting, with partners SinoCarbon, SQ Consult B.V., MWH, and Ecofys Netherlands V.B. and others.

As required, the evaluation team (ET) assessed the project performance by using the standard five Organisation for Economic Cooperation and Development's Development Assistance Committee's (OECD DAC) evaluation criteria, i.e. (1) relevance, (2) efficiency, (3) effectiveness, (4) impact, and (5) sustainability, and **two EU specific evaluation criteria**, i.e. (6) EU value added, and (7) coherence of the Action in the evaluation process. The Terms of Reference (ToR) also required the ET to consider (8) **cross-cutting issues** (particularly gender equality and social inclusivity, the rights-based approach and the Leave-No-One-Behind principle).

The formal start of the final evaluation project was 11th January 2021. The Inception Phase was finished by 22nd January, while the Desk Phase with in-depth document analysis, some initial interviews, and the methodological design of the Interview Phase was completed by 9th February. Following the first two phases, in February, March and April, there were briefings and in-depth interviews with the EC Directorate General for Climate Action (DG CLIMA) and the Service for Foreign Policy Instruments (FPI), the MEE in China, the project team (PT) led by ICF Consulting and other stakeholders benefiting from the project actions. These interviews were held in online-meetings. An online survey was also distributed to the stakeholders benefiting from the project actions (results are provided in Annex 8). At the end of the Interview Phase, there was an online debriefing with DG CLIMA and FPI. Tangible outputs delivered by the ET were the Inception Report, the Desk Report, the Intermediary Report and the Final Report (this report). The overall evaluation assignment was completed in May 2021. The detailed methodology followed by the final evaluation is included in Annex 3.

Background

An important instrument for China to achieve its long-term greenhouse gas (GHG) emission reduction target of reducing its gross domestic product's (GDP) CO_2-intensiity (CO_2 emissions per unit of GDP) by 60 to 65% by 2030 is the establishment of a domestic ETS. The ETS is meant to become a major climate policy tool to help China realise its Nationally Determined Contributions (NDC) to the Paris Agreement on climate change and its long-term low-carbon strategy.

The first discussions on a national ETS in China started in 2011, and in 2013 pilot projects were initiated, including actual emissions certificates trading. By August 2020, China's pilot ETSs covered nearly 3,000 industrial emitters in seven regions. Since 2013, 406 million tonnes of CO_2 equivalent GHG have been traded (Reuters, 2020). In October 2020, the Chinese government announced that it is targeting the **launch of a nationwide emissions trading scheme during the 14th Five-Year Plan from 2021 to 2025** (Reuters, 2020). There are still obstacles to implementing a fully-fledged ETS at the provincial or municipal level due

to a lack of personal capacity, although the central government took steps to train industry and government experts to be ready for real-time trading.

The Chinese ETS (also referred to as CN ETS in this report) aims to be a cap-and-trade approach similar to the EU ETS. Currently, it is still intensity-based or a baseline-and-trade system. In the baseline-and-trade system applied in China, baseline emission benchmarks (CO_2/kWh_{el}) are politically defined, e.g. for conventional coal-fired power plants. In the CN ETS, the companies buy emission allowances, if they need additional emission rights, while companies with surplus allowances sell them. The resulting ETS is allocation-efficient, i.e. through trading, those actors with the lowest reduction costs can take over the emissions reduction of those companies for which the reduction would be very expensive.

The Intervention Logic or Theory of Change

Against this background and in order to support this process, in 2017, the EC, represented by DG CLIMA and FPI, funded the "Platform for Policy Dialogue and Cooperation between EU and China on Emission Trading." According to the project's ToR, the overall objective of the Action is to enhance cooperation with China on climate change by continuing to support China in building up a nationwide ETS contributing to reducing its GHGs. More specifically, the EU-China ETS project serves two **main objectives**:

- **Establishment and reinforcement of a policy dialogue between China and the EU on the development of emission trading in both constituencies**. The aim is to increase the mutual understanding of relevant developments affecting the effectiveness and efficiency of emission trading systems in the EU and China.
- **Support China in building its national ETS.** The project intends to support the Chinese counterpart in building the technical and regulatory capacity of emission trading to authorities, industry representatives and verifiers in China.

In order to achieve these results, according to the ToR, the project has **four components with different activities**:

a) **Policy Dialogue (Component A)**: Serving the goal of increasing the mutual understanding of relevant developments affecting the effectiveness and efficiency of emission trading systems in the EU and China, the project supports:
   - The establishment of an **EU-China Platform for Policy Dialogue on Emission Trading.** Its main activity is an annual political dialogue event.
   - The setting-up of a **network of Chinese ETS experts and joint research (JR) and internship activities between the EU and China**.

b) **Technical Training of Local Authorities (Component B):** In order to support the Chinese counterpart in building technical and regulatory capacity on emission trading, the Action provides for **direct training (rather than, as initially designed, a training-of-trainers (ToT) approach) to a critical mass of provincial-level officials mainly from Environmental Protection Bureaus (EPBs)** to improve their understanding of the CN ETS and their capacity to support ETS-related administrative and regulatory activities.

c) **Industry Capacity Building (Component C):** In order to establish a critical mass of industry representatives that are able to handle day-to-day requirements of a national ETS, **direct, screen-based training of industry representatives** has been held throughout China.

d) **Other Activities (Component D):** In order to provide a sufficient amount of flexibility to react on changes in the implementation of the national ETS and/or international developments, space is left for additional measures such as study tours, other forms of knowledge sharing etc.

Based on the above, **the Intervention Logic or Theory of Change (ToC) of the project appears to have been well-structured and supported by adequate assumptions**.

Answers and findings to the evaluation questions

A summary of the main findings in relation to the evaluation criteria and questions is provided below. The full list of evaluation questions is provided in the Evaluation Matrix in Annex 4. In Annex 9, a summary of the answers to the evaluation questions (EQs), judgement criteria and indicators is provided.

EQ1 – PROBLEMS AND NEEDS (RELEVANCE): TO WHAT EXTENT THE EU-CHINA ETS PROGRAMME ADDRESSES IDENTIFIED PROBLEMS AND NEEDS?

According to the Memorandum of Understandings (MoU) on ETS signed between the EC and the MEE in 2018, there is need for enhanced cooperation between the two parties against the background of the roll-out of the national ETS in China and the revisions of the EU ETS in order to combat climate change. Both sides acknowledge the urgency of addressing global climate change and the importance of the 2015 Paris Agreement. Both parties regard emissions trading as a cost-effective tool to contribute to a low-carbon economy and to induce related innovations and deployment of low-carbon technologies (EU Commission and MEE, 2018). Moreover, in November 2019, the MEE issued **"China's Policies and Actions for Addressing Climate Change (2019)"**. Relating to the ETS, the MEE stated that measures have to be taken further to steadily push forward the construction of a national carbon market.

During his speech to the UN General Assembly on 22 September 2020, the Chinese President Xi Jinping announced two elements in the fight against climate change: (a) to aim to have CO_2 emissions peak before 2030; and (b) to achieve carbon neutrality before 2060. Soon after the pledge, in early November 2020, the MEE released a draft of the National Carbon Trading Management Measures for public comment, which was ultimately published in January 2021.

This positively evolving political context shows that the EU-China ETS programme is highly relevant to the needs of the Chinese government to reduce GHG emissions in a cost-effective way.

During the implementation of the programme, there were **four main changes in external factors** or context during the programme implementation which (a) positively or (b) negatively impacted the relevance of the programme for its key stakeholders and target groups. These are:

- **Change in leadership of the Climate Change Department (CCD) of the NDRC coupled with the shift of responsibilities in the Chinese government on climate change (including ETS) issues:** In November 2017, one months after the signature of the contract, there was a change in the leadership of the CCD of the NDRC. The new CCD's Director General requested to move from ToT to direct training. The need for direct training was emphasised by the repercussions of the government restructuring initiated in March 2018, which moved climate change from the NDRC to the MEE. In fact, at the local level, only about 2/3 of the former local DRC staff went to the EPBs (formally under the MEE), whereas 1/3 remained at the local DRCs. This development led to a considerable loss of capacity in the local EPBs with regard to climate change related issues, especially on ETS issues. **Within this context, the relevance of the project substantially increased** as it provided crucial capacity building support to the EPBs as demonstrated by the large-scale training carried out in 2019.
- **The pledge of the Chinese government to achieve a carbon neutral economy in China by 2060**: President Xi's announcement in September 2020 remarked on the importance of the establishment of a domestic ETS as a cost-efficient tool to achieve the carbon neutrality goal. **Against this background, the relevance of the**

programme has increased as the programme supports China in implementing the system in an effective way.

- **The COVID-19 pandemic:** Although COVID-19 had a certain impact on the political priorities and hence on the relevance of the ETS in China for some time, **the impact was limited** due to the relatively quick recovery in China.

The development of a national ETS is a tremendous amount of work involving different stakeholders including national and local government authorities, industry, third-party verifiers, research institutes and financial entities. With its different components, the EU-China ETS project is addressing the following **stakeholder groups**:

- National and local government authorities;
- Research Institutes as trainers of relevant ETS-related skills;
- Industry representatives and sector associations as trainees;
- Third-party verifiers;
- Financial entities such as emission trading platforms.

The evaluation confirms that they are the relevant target groups to be addressed by the EU-China ETS programme intending to (a) establish and enhance a regular political dialogue and scientific cooperation, and (b) support China in developing an effective ETS by building effective capacities on emission trading in the country.

EQ2 – SOUND MANAGEMENT AND VALUE FOR MONEY (EFFICIENCY): TO WHAT EXTENT IS THE RELATIONSHIP BETWEEN PROGRAMME INPUTS AND OUTPUTS TIMELY, COST-EFFICIENT, AND TO EXPECTED QUALITY STANDARDS?

EQ2 looked at the cost-effectiveness and cost-efficiency in financial and project management. Cost-efficiency is the ability of a programme to convert its financial resources into outputs, whereas cost-effectiveness looks at the ability of the programme to use its budget as a means to achieving the intended outcomes and impact.

According to the information gathered by the evaluation, the project has been using the available resources in a cost-effective way. In particular, the high level of flexibility in managing the reallocation of the budget between project components to address changes in context and implementation circumstance was one of the keys to the success of the project. For instance, in the **extension proposal**, the EU Delegation granted the PT's request to reallocate unspent budget and unused Non-Key Expert days to fulfil activities for almost nine additional months at no extra cost, which is allowing the programme to provide needed support to the Chinese government in the crucial phases leading to and right after the actual start of the national ETS. Another example of cost-effectiveness – but not of cost-efficiency – enabled by FPI's financial flexibility is the transfer of about one third of the incidental expenditure budget to the fee budget at short notice in order to respond to a request by the Chinese government for **large-scale training at the end of 2019**.

The evaluation also confirms that the project has been managed cost-efficiently. Some examples have been provided by interviewees in this regard. For example, the **ratio of trainers to trainees** was higher at the beginning and, after careful evaluation, it was reduced in time. However, the main example of cost-efficiency provided was about **savings in training cost** due to the transfer of certain costs to the Chinese government. Based on ICF's estimations, it was assumed **the transfer of some training costs to China have saved roughly EUR 130,000 to the project budget** over 14 training interventions delivered under Component B during the period from October 2020 to January 2021. The EU Delegation expects that in the future, e.g. in the next EU-China ETS project, the EU budget will only cover costs related to the trainers, while all organisational costs, including meals and venues, will be paid by China. These provisions should be agreed upon between EU and China before the beginning of the EU-China ETS Project Phase II.

Furthermore, there are two instances to be reported that can generally be considered cost-effective because they indeed served well the pursuit of the project goals, but not very cost-efficient because they either involved major revisions to the budget or a disproportionate attribution of costs to the project. The first case, as mentioned above, is the transfer of a large amount of incidental expenditure budget (about EUR 1.35 million out of EUR 4 million of total incidental budget) to fees at short notice to replenish the exhausted fee budget, due to the need for large-scale training from the Chinese counterpart during October-November 2019. In general terms, transferring incidentals to fees or vice-versa is a procedure that should be exceptional and of minor entity, but on this occasion, it was substantial, and an urgent addendum to the service contract had to be prepared. The evaluators understand the different needs of FPI and DG CLIMA, respectively of a high degree of certainty in the financial management and planning, and of an effective use of resources to pursue the technical and political goals of the project. Flexibility has certainly been one of the keys to the success of this programme and FPI has been demonstrated to be a flexible instrument (see also above). However, even flexibility needs to be limited to a reasonable degree. **A lesson for Phase II of the project could be to limit the budget allowed to be used under Component D to increase certainty in the financial management. Nonetheless, the cap needs to be carefully set in close discussion with DG CLIMA and in light of the negotiations about financial reciprocity between the EU and China, so that enough funding is allocated for use in demand-driven activities.**

The second instance concerns the fact that some expenses for the large-scale training in late 2019 were shared by the EU with other donors. Although cost sharing could have been considered positive evidence of cost-efficiency, here the EU appears to have covered roughly 80% [1] of the whole financial effort for the large-scale training, which is disproportionately high compared to what other donors have provided. Therefore, although covering a higher share of the training budget than other donors reflected the importance of the EU as key strategic ETS partner of China (i.e. cost-effectiveness), from a financial management perspective, the outcome cannot be considered highly cost-efficient for the EU and more reciprocity should be sought in the future (including in Phase II).

The programme management structure appears to be adequate to support the achievement of the goals of the project. There is clear and appropriate division of roles and responsibilities among the three PT Key Experts (KEs) according to the Project Components A-C and the lead of DG CLIMA on steering the contents of Project Component D, which is fully demand-driven. There is also evidence that the PT has worked closely with DG CLIMA and FPI as well as with the MEE, and that it benefited handsomely from having a liaison officer between MEE and the project.

The evidence confirms that the monitoring and reporting arrangements of the EU-China ETS programme seem to be useful and practical. In addition, The EU expressed its satisfaction with ICF as a reliable and very professional contractor. Despite that, **recurrent delays of ICF in submitting interim reports were reported**, something that needs to be urgently reversed by the PT to improve the project accountability towards the EU.

The project team, the EU and the Chinese counterpart all confirm that the quality of the outputs and the services delivered by the project has been high. Some evidence of this is provided by:

- The very positive feedback received by trainees in post-training surveys (over 90% of satisfied respondents);
- The fact that none of the Non-Key Experts proposed by the project team were rejected by the EU, which is evidence they were technically qualified.

[1] This figure is anecdotal and could not be verified by the ET, although evidence point to the fact that the EU covered the majority of the large-scale training costs.

Furthermore, the interview with MEE representatives highlighted that the fact that there is **continuity of support by the EU on ETS has been seen as very helpful**. They recognised the consistent support provided by the previous (DEVCO-funded), the present and the future project, which they have seen as building on each other.

The replication potential of the project has been rated high. In particular, the **establishment of two communities of trainers (under Component B and C) and researchers (under Component A)** has been seen as a very important legacy for the future, including further continuation of JR and training in the Phase II project. Related to the replication potential, **the ToT approach appears to be a recommendable solution to scaling up the training activities to a scale relevant to the national ETS in China.** ToT is currently present in the Action Fiche for Phase II, but this will likely work only if the Chinese government believes in it too. Perhaps, now that there is an established network of ETS trainers, the MEE will be persuaded of the efficiency and effectiveness of ToT compared to direct training.

EQ3 – **ACHIEVEMENT OF PURPOSE (EFFECTIVENESS)**: TO WHAT EXTENT HAS THE PROGRAMME DELIVERED INTENDED OUTPUTS AND ACHIEVED OUTCOMES (BOTH INTENDED AND UNINTENDED)?

Effectiveness is about the ability of the programme to deliver its outputs and their contribution to its intended (and unintended) outcomes. In the Executive Summary, only the achievement of the outcomes is treated and we refer to Section 2.3.1 for details on the delivery of outputs.

The evaluation highlighted evidence showing that the programme has been achieving all its intended outcomes, which are:

- **Outcome 1: To contribute to strengthening the political dialogue between China and the EU on the development of ETS.** Interviews show evidence that the political dialogue between the EU and China has been strengthened during the period of the project. The MEE confirmed it is very satisfied with the EU-China policy dialogue on ETS that the project supported. They were very pleased with the level of commitment by the EU to cooperate on climate change and they also praised the good level of communication with the project team, the EU Delegation and DG CLIMA at both bureau (technical) and political levels. Likewise, interviewees from DG CLIMA confirmed that the project has been very successful in positively sustaining the bilateral political dialogue on ETS.
- **Outcome 2: To support China in building and operating an effective ETS through the consolidation of an active network of experts.** MEE stressed how they believe the project "played a very important role" in building the capacity of local authorities on the ETS. They mentioned they were very pleased with the ability to respond to their need for large-scale training in 2019 and they emphasised the added value of this project of covering all Chinese provinces. The same is true for local authorities' trainees interviewed, who, during the evaluation, consistently claimed that they now felt confident to both explain the importance of the ETS and to support its operations. They all linked their confidence to the training received by the project. At the central level, there is evidence that the project team was respected by the MEE's CCD staff and helped strengthen their capacity on technical matters related to the ETS. Finally, many interviewees believe that the project contributed to integrating elements "borrowed" from the EU ETS, but recalibrated to meet the Chinese context. Examples regularly cited were the MRV guidelines and allowance allocation mechanisms (benchmarking).
- **Outcome 3: To enable most industrial enterprises to be covered by national ETS to participate in market with stronger willingness and capacity.** The MEE expressed its satisfaction with the design and implementation of the training events targeting local industry representatives. They appreciated that they covered both policy areas as well as the day-to-day operations linked with the functioning of the ETS,

including helpful practical exercises. The interviewees from the private sector (Chinese energy companies and emission exchanges) consistently confirmed that after the training they felt confident to explain the importance and the functioning of the CN ETS. Moreover, when asked if they would be able to operate confidently on the ETS, all interviewees answered positively.

Some evaluation questions concerned the positive and negative influence of context-related factors on the effectiveness of the programme. In terms of **external factors influencing the EU-China political dialogue on ETS (Outcome 1)**, the ones identified are:

- **Changes in leadership:** During project implementation, leaderships at the helms of both the European Commission and the NDRC / MEE changed. Especially, in late 2017, the Director in charge of the ETS at the NDRC (later to be moved to the MEE) changed. Although these changes implied some revisions of the original work plan, in particular concerning the preference for direct training in spite of ToT, the political dialogue between the EU and China did not seem to have suffered by such change in political leadership. The reason can be found in the fact that a well-working Chinese ETS is of mutual interest.
- **Policy changes:** Similarly, the launch of the European Green Deal on the one hand, and the Chinese announcement about the 2060 carbon neutrality target on the other hand strengthened mutual interests in supporting a strong Chinese ETS even more.
- **COVID-19 and government restructuring:** In terms of key barriers to the promotion of political dialogue, the transfer of climate change responsibilities to the MEE and COVID-19 appear to have been the main ones. The government restructuring caused serious delays to the project during 2018 and 2019, which led, *inter alia*, to the cancelling of the Policy Dialogue event in 2019 (see Section 2.3.1.1). The pandemic impeded regular travel of EU officials to China and was the main cause for not holding the Policy Dialogue event in 2020. Nevertheless, the use of virtual meetings and of other venues outside China (e.g. in Spain in 2019) were adequate solutions to maintaining the momentum of political dialogue. This was also fostered by the knowledge exchange brought about by the JR component, which interviews confirm was highly appreciated by the Chinese political stakeholders and researchers.

Concerning the **external factors influencing capacity building (Outcomes 2 and 3)**, these were:

- **Government restructuring:** The government's restructuring was definitely the main external factor that influenced the project implementation. The restructuring slowed down the ability by the project to identify the local trainees and their training needs, as some of the key stakeholders' roles and responsibilities concerning ETS changed. In addition, as discussed above, the shift in climate change responsibilities created a massive capacity gap in local and regional EPBs. In turn, this required substantial additional resources to be directed to training activities, as is shown by the budgetary changes required to carry out large-scale training in 2019. Nevertheless, the project structure proved to be solid and flexible enough, and the planned training interventions were delivered successfully. Ultimately, the evidence shows that the direct training format was conducive to a good outcome being achieved in strengthening the capacity of local authorities nationwide, irrespective of the fact that a successful ToT approach is thought to be more effective in the longer term.
- **COVID-19:** the public health crisis appears to have only halted the capacity building activities during the first half of 2020, but the successful containment of the pandemic in China allowed the programme to accelerate the training subsequently.
- **Geographic differences:** The evaluation interviews also probed if geographical origins influenced the effectiveness of training events. The evidence collected shows that, as expected, trainees from those cities which were part of ETS pilot schemes generally

felt more confident in understanding and operating in a national ETS. This is also true for power sector companies, which were the main operating companies in pilot ETSs and are the first ones to be included in the national ETS.

The evaluation interviews highlighted that the project team has been very effective in promoting knowledge exchange both within the programme and with other initiatives. The communication within the JR component seems to have been effective although it was affected by COVID-19. The project also organised inter-group knowledge exchanges between JR groups, although they appear to have been mainly limited to the sub-group under the same JR topics. In terms of external knowledge exchange, the project team has been very proactive in talking and engaging with others supporting China in ETS. They are a very active member of a core group of ETS-supporting initiatives including the World Bank, ADB, GIZ, Norway, EDF CIFF, NCSC, which regularly share with each other updates on the implementation of their projects and activities. **The exchange of information with the other initiatives appears to have been broadly effective in avoiding duplication of work and wasting of resources.**

EQ4 – **ACHIEVEMENT OF WIDER EFFECTS (IMPACT)**: WHAT EVIDENCE IS THERE THAT THE PROGRAMME HAS CONTRIBUTED TO ITS INTENDED IMPACT?

As said, **the domestic ETS could become a major climate policy tool to help China realise its NDC and its long-term low-carbon strategy to achieve carbon neutrality by 2060**. **The project has positively contributed to the appropriate design of the ETS and the building of the national capacity to run the CN ETS as it**, *inter alia*, has supported China to:

- Determine appropriate allocation mechanisms with feasible baselines in power generation, iron and steel, pulp and paper industries;
- Determine effective monitoring, reporting and verification of the achieved CO_2-emission reductions; and
- Supporting the formulation of relevant legislation and regulation of the ETS market.

A functioning CN ETS will help to achieve the NDCs and China's long-term low-carbon strategy to achieve carbon neutrality by 2060. The CN ETS starts only with power generation, later including other economic sectors such as iron and steel, chemical industry, pulp and paper industry etc. Coal-fired power plants account for about 50% of China's CO_2 emissions from fossil-fuel combustion. Reducing emissions from coal-fired power plants will therefore be essential in reaching China's low-carbon goals, and these plants will be the key sources covered by the ETS.

Furthermore, during the project implementation period, **the EU-China ETS programme had a positive impact on maintaining a regular policy dialogue on emission trading between China and the EU and facilitating joint research of Chinese and European experts on issues related to the nationwide roll-out of the Chinese ETS.** According to the new EU strategy on China, depending on the policy field, China is seen as a negotiating partner, competitor or systemic rival (EU Commission, 2019a). As for climate change and ETS, China and the EU are strategic partners, and the ETS is at the top of climate change priorities.

Also, in the EU-China ETS programme, **European experts and selected Chinese experts undertook joint research.** Their goal is to combine the in-depth knowledge they have of carbon markets both in Europe and worldwide with an understanding of China's regional ETS pilots and the overarching domestic political and economic context. A broad group of stakeholders have also been consulted during the research. Based on this work, they provided policy recommendations on critical issues relating to the transition from regional pilots to a national ETS. In this sense, e.g. the EU-China ETS programme research on the determination of benchmarks for different technologies and different installation sizes is an important support for an effective allowance allocation in the national ETS. **The findings and outcome of the research activities have been submitted to MEE, the main ministry responsible for the**

ETS and increased its understanding of relevant issues on the roll-out of the domestic ETS.

According to interviews with Chinese and European researchers, **there was considerable impact provided by the programme to promote EU and/or international standards and regulations relating to the climate sector and ETS**. According to information provided by the PT, it includes:

- ETS Pilots Registry and preparation for the establishment of a national ETS registry (operation, maintenance and security related aspects);
- ETS Pilots MRV Systems and preparation for the establishment of a national MRV system (monitoring plans);
- ETS Pilots Allocation System and preparation for a national ETS allocation system (benchmarking allocation + auction);
- Coverage of aviation sector;
- Discussions about market stability reserve (MSR) mechanisms.

All in all**,** the project contributed to integrating elements from the EU ETS, but recalibrated to meet the Chinese context, e.g. MRV guidelines and allowance allocation mechanisms (benchmarking).

EQ5 - LIKELY CONTINUATION OF ACHIEVED RESULTS (SUSTAINABILITY): WHAT IS THE LIKELIHOOD THAT THE OUTCOMES WILL BE SUSTAINED AFTER THE END OF THE PROGRAMME'S FUNDING PERIOD?

Strong evidence exists that the outcomes of the Programme will be sustained after the end of its funding period in 2021 and even beyond due to the following observations:

- The EU-China ETS project team and the EU programme representatives agreed on a **No-Cost Extension** work plan until June 2021;
- A **second phase** of the Platform for Policy Dialogue and Cooperation between EU and China on Emissions Trading is planned to run from the end of 2021 to the end of 2023;
- There are various ETS issues to be worked on during China's 14th Five-Year Plan (2021-25) and a **need for sustained political dialogue and there is evidence of a clear political commitment to ETS by the Chinese government at a high level**.
- As sound research co-operation seems to have been established between the European and Chinese researchers in the field of ETS, **JR activities are likely to be sustained in the future, further deepening and expanding scientific cooperation between Europe and China**;
- **The technical trainees of the EU-China ETS programme seem to be able to maintain their capacities to operate a nationwide ETS,** and capacities of the Chinese industry and industry association representatives to handle day-to-day actions seem to be sustained.

EQ6 – EU VALUE ADDED: WHAT ADDITIONAL VALUE HAS THE PROGRAMME PROVIDED COMPARED TO SIMILAR ACTIONS CARRIED OUT BY EU MEMBER STATES?

The evaluation investigated the EU Value Added by asking questions on two main aspects: (a) the EU added value compared to having the project delivered by single EU Member States; and (b) the EU added value within the EU-China ETS project compared to other donor-funded initiatives supporting the Chinese ETS.

The EU Value Added is particularly evident in this project and it is mainly related to:

- **The clear value from learning from the EU ETS:** First of all, as the EU ETS is run at regional level and not at Member State level, this project has a very high level of

credibility in the eyes of China. From the Chinese perspective (sources PSCs' minutes and interviews), it is evident that, since the national ETS is so central in the Chinese climate change strategy, the possibility to learn from the EU's experience in designing and delivering the different phases of the EU ETS is considered highly valuable by the Chinese government. Secondly, some of the Chinese researchers appreciated the possibility of producing cutting edge research based on the EU ETS experience.

- **The size of the EU compared to single Member States:** The size of the EU enhanced the authoritative voice of the political dialogue compared to single Member States. In fact, the EU may sometimes be conceived by Chinese (and other countries) as the United States of Europe. Moreover, the multi-level governance of the EU ETS, that has a system run at the EU level over very diverse national markets, is similar to what will happen with the Chinese ETS in relation to the nationwide system to be operated over very diverse Chinese provinces. Finally, in more practical terms, the size of the EU is also closer to the size of the Chinese market than any other single EU Member State.
- **The availability of a larger pool of ETS experts and expertise:** This is reasonable to expect because of the pioneering role of the EU in global carbon markets for almost 20 years and the much bigger size of the EU compared to its Member States. In particular, Chinese researchers confirmed that having the EU as scientific counterpart gave access to a larger base of experts and expertise compared to what would have been possible with a national project.
- **The centrality of the European Commission in EU climate diplomacy:** The EU climate policy is developed and decided in Brussels, not at the Member State level. The same can be said for EU climate diplomacy. In fact, the EU speaks with a single voice at the UNFCCC. Therefore, the European Commission is a more credible international interlocutor on climate change than single Member States.
- **The high political relevance of this project for both the EU and China in the context of broader international relations:** Indeed, China and the EU have both been taking bold steps towards climate change mitigation (e.g. EU 2030 Strategy, EU Green Deal, China's 13th and 14th Five-Year Plans, China 2060 carbon neutrality announcement) and they seem to be using climate change to tighten their broader political collaboration. This project has particular value for the EU because it is consistent with the EU goal of taking a leadership role in global climate action, particularly since the last US administration had decided to leave the Paris Agreement. The project has been central to ensuring China is in a position to achieve its mitigation goals, which is crucial to addressing climate change globally. Moreover, the Chinese government can gain value from learning from the political discourse in Europe around the EU ETS role in the European Green Deal.

The evaluation underscored some traits of this EU-funded project that added value compared to initiatives funded by other donors. First of all, there seem to be a basic difference between this project and other projects funded by **Multilateral Development Banks** (MDBs) (e.g. World Bank, ADB). These institutions tend to run North-to-South type projects, e.g. delivered through direct payments in the form of loans or grants, and the classic consultancy model whereby international experts deliver their support or knowledge to the receiving country. Unlike MDBs, this FPI project is based on a partnership delivery model, involving principles of financial reciprocity, joint research between EU and Chinese researchers, peer-to-peer political dialogue, the use of national trainers. Another key difference from this project and other initiatives funded by MDBs is that **the EU is an ETS implementer**, so it can provide first-hand ETS experience to China, which changes substantially the credibility of the source of knowledge. Furthermore, when compared to the others, this project has been **the only national scale project supporting an ETS in China.** All other projects have been reported to have had a much narrower geographical focus. Finally, **this is the only ETS project that involves peer-to-peer joint work between western and Chinese experts.**

In fact, while in other projects (for example in the Norwegian one), the Chinese side is the one that usually delivers the research, in this project both sides have been intensively involved in it.

EQ7 – COHERENCE OF THE ACTION: HOW COHERENT AND COMPLEMENTARY IS THE PROGRAMME WITH OTHER INTERVENTIONS IN CHINA IN THE ETS AREA?

The EU-China ETS programme is coherent with the EU policies regarding climate change mitigation, including the evolvement of the EU ETS against the background of enhanced GHG emission reduction goals as included in the European Green Deal and the revised EU ETS Directive. In addition, in April 2019, the **8th China-EU Energy Dialogue** was held, and China's National Energy Agency (NEA) and the European Commission signed a Joint Statement on the implementation of China-EU Energy Cooperation, emphasising the significance of clean energy cooperation for the implementation of the Paris Agreement (MEE, 2019). The EU-China ETS project is coherent with that joint statement.

The EU-China ETS programme is also **complementary to programmes / projects of single EU Member States in China in the field of ETS**. The largest programme of this kind is the German GIZ programme **"Capacity building for emissions trading schemes (ETS) in China"**, which was implemented during 2012-2019 and was commissioned by the German Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety (BMU). The main objective of the Action was to enhance the key Chinese institutions' knowledge, resources and political leverage required to develop and operate an emissions trading scheme at local and national level. During the Interview Phase, **additional projects have been identified from EU Member States**. The main ones are the following:

- Carbon Pricing Survey funded by the **Norwegian Embassy in Beijing**, the Environmental Defence Fund (EDF) and Energy Foundation China, which is implementing the China Carbon Forum;
- Carbon Market study project funded by the **Norwegian government**;
- The **UK government** used to fund some activities on emission trading in China under its Prosperity Fund, although these were terminated around 2015 (see Section 2.6.1).

The EU-China ETS programme is also coherent with and complementary to ongoing non-EU programmes / projects in China in the field of ETS. The most prominent donor was the **World Bank**. From 2013 to 2020, the World Bank's **Partnership for Market Readiness (PMR)** supported the design of China's ETS by mobilising international experience and expertise. Among the research topics, the PMR analysed whether China should allocate allowances using an absolute or a rate-based approach (sector benchmarks). Phase 2 under the World Bank **Partnership for Market Implementation (PMI) programme** is also supporting China in the design and improvement of its carbon market development policy portfolio. The **Asian Development Bank (ADB)** also funded a Carbon Market Study Project named **"Improving the Design of the National Carbon Emissions Trading System"** during the period October 2018 – September 2021. Carbon market capacity building and researches were also funded by the **Children's Investment Fund Foundation (CIFF)** implemented jointly by EDF China and SinoCarbon.

Finally, the EU-China ETS programme is coherent with domestic Chinese efforts to fully establish a national carbon market by (a) the acceleration of the construction of a national carbon trading system in terms of establishing and perfecting an institutional system, constructing a basic support system, and carrying out capacity building; (b) continuing to deepen the construction of pilot carbon markets; and (c) proactively promoting reform in the trading mechanism for CCER of GHGs (MEE, 2019).

EQ8 – CROSS-CUTTING ISSUES: TO WHAT EXTENT HAS THE PROGRAMME CONSIDERED AND SUCCESSFULLY CONTRIBUTED TO CROSS-CUTTING ISSUES, SUCH AS GENDER, SOCIAL INCLUSION

As requested by its ToR, the final evaluation assessed the relevance and mainstreaming of cross-cutting issues, which are the three universal values underpinning United Nations' 2030 Agenda defining the Sustainable Development Goals (SDGs) (United Nations, 2021a), in project design and implementation. These are: gender equality and women's empowerment (broadly related to the concept of gender equality and social inclusion (GESI)), the human rights-based approach (RBA), and the principle of Leave No-One Behind (LNOB).

In reference to the SDGs, there is a direct link between the programme and SDGs 13 (Climate Action) and 7 (Sustainable Energy). The PT clearly showed that they understand these links as they explicitly refer to the SDGs and the Paris Agreement in the training material prepared.

GESI was not taken into consideration in the project design by either the EU or the project contractors, and it played a very limited role in project implementation. Nevertheless, interviews with ICF highlighted how the project team is conscious of the importance of the topic and the need to do more about it. ICF showed a broad understanding of the GESI concept in general, and in relation to the project. Indeed, the evaluation found evidence that **the PT has actively discussed and considered GESI mainstreaming in the project.** ICF Consulting provided a number of examples in which they showed attempting to mainstream GESI considerations in this and especially other projects, for instance by trying to give public visibility to the high profile of EU and Chinese women at both technical and political levels. The key examples provided about this project are the organisation of a panel discussion, which was the first all-female panel discussion on the ETS (although the moderator was a male), and the visibility given to female leaders and researchers during respectively the Political Dialogue and the JR groups.

Lessons learnt

Lessons learnt aim at generalising findings and translating past experiences into relevant knowledge that should support decision making, improve performance and promote the achievement of better results. The most important ones identified by this evaluation are:

L1: The changes in the EU strategy on China, which now also include aspects of system rivalry and economic competition, did not have any impact on the relevance of the EU-China ETS programme to address the problems and needs of China to implement and further develop a national ETS.

L2: A shift of political responsibility from NDRC to MEE in 2018 resulted in a considerable demand for capacity building.

L3: The rolling-out of a national ETS will induce a huge additional demand for well-trained ETS experts from industry to handle the day-to-day business of a domestic emission trading system.

L4: The COVID-19 pandemic had a minor impact on implementation of the EU-China ETS programme especially the training activities.

L5: The programme benefitted from its flexibility and demand driven approach. The programme was able to quickly react to changes in the framework conditions.

Conclusions

Overall, through the above analyses based on the OECD/DAC and EU evaluation criteria as well as the cross-cutting issues, **the project's final evaluation team can conclude that the**

EU-China programme is a successful project. In particular, the following conclusions can be made:

C1: **Relevance:** The EU-China ETS programme is highly relevant for the climate change mitigation policy in China and the EU strategy for China.

C2: **Efficiency:** The EU-China ETS programme has generally been managed in a cost-efficient manner, generating evidence of value for money for the EU, and delivered in a timely and high-quality fashion. Improvements should be brought nevertheless as regards the reciprocity of costs between the EU and China (linked to R8) and budget management principles / flexibility allowed in the frame of the project itself (linked to R9).

C3: **Effectiveness:** The EU-China ETS programme was effective in delivering its intended outputs, which, in turn, have contributed handsomely to the attaining of sought outcomes.

C4: **Impact:** The EU-China ETS programme has already produced a positive impact on the design and implementation of the ETS in China, particularly through the training of ETS experts, research and policy dialogues, and is expected to generate more impacts for China in the ETS sector.

C5: **Sustainability:** Strong evidence exists that the outcomes of the Programme will be sustained after the end of its funding period in 2021 and even beyond.

C6: **EU Value Added:** The EU-China ETS programme delivered EU Value Added compared to alternatives funded either by single EU Member States or MDBs.

C7: **Coherence:** The EU-China ETS programme is coherent and complementary with other interventions in China in the ETS area.

C8: **Cross-cutting issues:** ICF showed an understanding of the link of the programme to the SDGs and they are referred to in the training material. However, GESI – which is related to LNOB and RBA – was not taken into consideration in the EU-China ETS programme design, and it played a very limited role in project implementation. However, the project team demonstrated a broad understanding of GESI and has actively discussed and considered its mainstreaming in the project. Based on all the evidence gathered, it is the view of the evaluators to assess the EU-China ETS project somewhere between Level 0 – Non-compliance and Level 1 – Minimum compliance on the GESI mainstreaming scale presented in Figure 7 in Section 2.8.2.

Recommendations

The key recommendations are intended to improve the Action in the framework of the cycle under way and to prepare the design of a new programme for the next phase (2021-2023). We refer to Section 3.3 for more details and guidance on each recommendation.

Recommendations for the Project Team

R1: Increase the interaction with the other on-going initiatives (GIZ, Norwegian government, World Bank, ADB etc.).

R2: Increase the speed of reporting.

R3: Try to integrate some of the lessons about mainstreaming GESI aspects from other projects into implementation of the programme.

Recommendations for the EU Commission (EUD, FPI and DG CLIMA)

R4: Intensify the focus of the policy dialogue and research in Component A on the requirements that absolute caps in the national ETS evolve to a cap-and-trade system.

R5: Agree with the Chinese counterpart that the ToT approach will be implemented in Phase II of the programme.

R6: Continue with the direct training approach in the short-term, in parallel with agreeing sufficient reciprocity of financial contribution with the Chinese government (see R8).

R7: Enlarge the training of Components B and C to cities in line with the ToT approach.

R8: Ensure there is clarity in the definition of the financial responsibilities between the EU and China based on the principle of reciprocity before the beginning of Phase II.

R9: Consider adding a cap to the budget allowed to be used under the equivalent of Component D in Phase II. The cap needs to be carefully set in close discussion with DG CLIMA and in light of the negotiations about financial reciprocity between the EU and China (see R8).

R10: Consider requirement for more coordination with similar EU-programmes on ETS in Asia and other parts of the World in the next phase.

R11: Provide more coordination of activities by the EU and other donors on the promotion of renewable energy in power generation.

R12: Explicitly state the importance of GESI mainstreaming and the level of ambition aimed at by the EU in this regard by including specific provisions in the ToR of the Phase II project.

Recommendations for the Chinese government (both central and local)

R13: Include the discussion on absolute targets and the inclusion of other greenhouse gases of the national ETS in the political dialogue with the Commission.

R14: Include the discussion of the implications of the national ETS on competition for different economic sectors in the political dialogue with the Commission.

R15: Include research and discussions on lessons learnt from the EU on the division of GHG mitigation targets and strategies between the EU and Member State level.

R16: Consider a step-by-step approach starting to give more priority to raising awareness at the city level and, in a second step, villages may also be included.

R17: Recognise the importance of the community of ETS trainers established by the programme by providing formal “national ETS trainer” certifications.

R18: Acknowledge the need to move towards a ToT approach in the longer-term in order to reach the scale required by the size of the Chinese ETS.

1. Introduction

1.1. Background

Climate change is one of the most important challenges of the 21st Century. With 11.2 billion tons in 2018 (BP, 2020), China is the world's largest emitter of carbon dioxide (CO_2), the most abundant greenhouse gas (GHG). This represents about 30% of total CO_2 emissions in the world. With 58%, China's primary energy supply is still largely coal driven. However, this share already dropped significantly compared to about 72% ten years ago. In 2015, China also signed the UNFCCC Paris Agreement to limit global warming well below 2 degree Celsius and as close to 1.5 degree Celsius as possible.

To fulfil its obligations, China committed itself to reduce its gross domestic product's (GDP) CO_2-intensiity (CO_2 emissions per unit of GDP) by 40-45% compared to 2005 levels by 2020 (target overachieved) and by 60 to 65% by 2030. During his speech to the UN General Assembly on 22nd September 2020, the Chinese President Xi Jinping announced two elements in the fight against climate change: (a) to aim to have CO_2 emissions peak before 2030 and (b) to achieve carbon neutrality before 2060.

One important mile-stone to achieve its long-term GHG emission reduction target is the establishment of a domestic emission trading system (ETS). The ETS is meant to become a major climate policy tool to help China realise its Nationally Determined Contributions (NDC) to the Paris Agreement on climate change and its long-term low-carbon strategy.

The first discussions on a national ETS in China started in 2011, and in 2013 pilot projects were initiated, including actual emissions certificates trading. The Chinese ETS (also referred to as CN ETS in this report) aims to be a cap-and-trade approach similar to the EU ETS. Currently, it is still intensity-based. The national trading system was originally pledged by China's President Xi Jinping ahead of the Paris Climate Accord in 2015. In December 2017, China announced the launch of the CN ETS, designed to include all major industrial sectors. In January 2021, relevant regulations have been issued, inter alia concerning Monitoring, Reporting and Verification (MRV) of the sectoral emissions, the initial allocation of the emission certificates etc. in the power sector.

The approach of a cap-and-trade ETS is based on the concept developed by John H. Dales (1968). The baseline-and-trade system currently applied in the CN ETS works quite similarly. In the baseline-and-trade system applied in China, baseline benchmarks (CO_2/kWh_{el}) are politically defined, e.g. for conventional coal-fired power plants. Initially, according to the project team (PT), eleven benchmarks for different technologies and power generation capacities had to be defined. In the course of the pilot phase, however, the number of benchmarks was reduced to three. High default benchmarks for coal-fired power plants as in the Chinese ETS tend to lead to an over-allocation of emission allowances (IEA, 2020). Since these certificates are freely tradable on Environmental Exchanges, the price for these certificates is determined by their supply and demand. Therefore, the emissions of the entities subject to the cap have to be effectively monitored. Emissions which are made without emission rights have to be subject to an effective penalty to prevent from illegal emissions. In the Chinese baseline-and-trade system, the companies buy allowances, if they need additional emission rights. Companies with surplus allowances sell them. In the pilot phase, there were different regional Environmental Exchanges. According to the PT, now there is only one national trading platform in Shanghai.

The resulting cap-and-trade ETS is allocation-efficient, i.e. through trading, those actors with the lowest reduction costs can take over the emissions reduction of those companies for which the reduction would be very expensive. As a result, this means that, assuming complete competition, a desired reduction amount can be achieved cost-effectively (economic minimum principle). From the point of view of the economic theory, emissions trading is even more cost-efficient than an environmental tax. It is usually much more efficient than regulatory or planning

instruments of environmental policy, because the state usually does not have the necessary information about avoidance costs for companies to carry out regulatory interventions at the optimum level.

China's power and heat generation to a large extent relies on coal fired power plants. Hence, to start the domestic ETS in the power sector seems to be the right approach. According to the International Energy Agency (IEA) (2020), installed coal power capacity has more than quadrupled since 2000 from 222 gigawatts (GW) to 1,007 GW in 2018, mainly driven by the deployment of additional and larger coal plants since 2005, which are using the more efficient supercritical and ultra-supercritical technologies. As a result, average coal plant efficiency improved from 30% in 2000 to 39% in 2018, making China's coal fleet one of the World's most efficient. Since 2000, efficiency improvements in the sector rapidly decreased CO_2-intensity, though the trend has slowed recently. The chosen ETS allowance allocation, which is output-based and reliant on benchmarks, will create incentives to increase the efficiency of existing coal-fired power plants.

By August 2020, China's pilot ETSs covered nearly 3,000 industrial emitters in seven regions. Since 2013, 406 million tonnes of CO_2 equivalent GHG have been traded (Reuters, 2020). In October 2020, the Chinese government announced that it is targeting the launch of a nationwide emissions trading scheme during the 14th Five-Year Plan from 2021 to 2025 (Reuters, 2020). There are still obstacles to implementing a fully-fledged ETS at the provincial or municipal level due to a lack of personal capacity, although the central government took steps to train industry and government experts to be ready for real-time trading.

Against this background and in order to support this process, in 2017, the European Commission (EC) represented by the Directorate General for Climate Action (DG CLIMA) and the Service for Foreign Policy Instruments (FPI) initiated the "Platform for Policy Dialogue and Cooperation between EU and China on Emission Trading" (hereinafter also called EU-China ETS project or programme) with a budget of about EUR 10 million, due to be completed by June 2021. It is the follow-up of the programme from 2013-2017 supporting emission trading in China. The initial political counterpart in China was the National Development and Reform Commission (NDRC). In 2018, the Chinese government was restructured and climate change-related policies were transferred to the Ministry of Ecology and Environment (MEE). The project contractors are led by ICF Consulting, with partners SinoCarbon, SQ Consult B.V., MWH, and Ecofys Netherlands V.B. and others.

The project start was 9th October 2017 with a project duration of 36 months and received an extension to June 2021. Subsequently, the final evaluation of this project covers the time between 9th October 2017 to date (i.e. the end of March 2021). Since 2010, the EU and its Member States implemented different projects related to climate change issues in China from different perspectives. Importantly, the China-EU summit in July 2018 saw the signature of a Memorandum of Understanding (MoU) on ETS cooperation between the two entities. Finally, it is important to mention that the EU has published an Action Fiche for a Phase II of the current project, which makes the learning aspects of this final evaluation particularly useful for the design of the next phase.

The EU ETS started in 2005 and initially covered power plants (>20 MW), iron and steel smelting, coking plants, oil refineries and cracking plants, cement and lime production, glass, ceramic and brick industry, as well as paper and cellulose production. In 2013, emitters from other economic sectors were included. Operating for such a long time, the EU ETS provides for good practices with regard to the establishment of a domestic ETS in China.

According to the Terms of Reference (ToR) of the project, the focus of the final evaluation of "Support the platform for policy dialogue and cooperation between EU and China on Emission Trading" programme is on the "assessment of achievements, the quality and the results of Action in the context of an evolving cooperation policy with an increasing emphasis on result-oriented approaches and the contribution towards EU foreign policy objectives" as well as to a political dialogue on climate change, especially on ETS. The EU Strategy on China directs the

EU to find practical ways to engage China in its policy reform process (to achieve mutual benefits in political, economic, trade and investment, social, environmental, and other relations). Foreign policy objectives, *inter alia*, include reciprocity, a level playing field and fair competition across all areas of cooperation to be strengthened. As the biggest emitter in the world, China is an essential partner of the EU in international negotiations on climate change. Following the 2015 EU-China Joint Statement on climate change, the EU aims to pursue further joint efforts with China to speed up the implementation of the Paris agreement of 2015. Specifically, the EU aims to work together with China to establish or deepen cooperation in areas such as renewable energy production and energy efficiency, carbon markets such as the national ETS, low-carbon cities, and hydrofluorocarbons. From this perspective, the evaluation should "look for evidence of why, whether or how these results are linked to the EU intervention and seek to identify the factors driving or hindering progress and results. The final evaluation should provide an understanding of the cause and effect links between: inputs and activities, and outputs, outcomes and impacts. The evaluation should serve accountability, decision-making, learning and management purposes". The results of the final evaluation shall enable the stakeholders to ex-post assess the success of the Action relative to its objectives and provide for key lessons learned, conclusions and recommendations in order to improve future Actions.

The EPRD-led consortium has been selected by the EU Delegation (EUD) in China with two evaluators for the final evaluation of the EU-China ETS project. As required, the evaluation team assessed the project performance by using the standard five Organisation for Economic Cooperation and Development's Development Assistance Committee's (OECD DAC) evaluation criteria, i.e. (1) relevance, (2) efficiency, (3) effectiveness, (4) impact, and (5) sustainability, and two EU specific evaluation criteria, i.e. (6) EU value added, and (7) coherence of the Action in the evaluation process. The ToR also required the evaluation team to consider (8) cross-cutting issues (particularly gender equality and social inclusivity, the rights-based approach and the Leave-No-One-Behind principle).

The formal start of the final evaluation project was 11th January 2021. The Inception Phase was finished by 22nd January, while the Desk Phase with in-depth document analysis, some initial interviews, and the methodological design of the Interview Phase was completed by 9th February. Following the first two phases, in February, March and April, there were briefings and in-depth interviews with DG CLIMA and FPI, the MEE in China, the PT led by ICF Consulting and other stakeholders benefiting from the project actions. These interviews were held in online-meetings. An online survey was also distributed to the stakeholders benefiting from the project actions (results are provided in Annex 8). At the end of the Interview Phase, there was an online debriefing with DG CLIMA and FPI. Tangible outputs delivered by the evaluation team (ET) were the Inception Report, the Desk Report, the Intermediary Report and the Final Report (this report). The overall evaluation assignment was completed in May 2021. The detailed methodology followed by the final evaluation is included in Annex 3.

1.2. Reconstruction of the Intervention Logic

This section presents a summary of the project's logic and components.

According to the ToR of the project, the overall objective of the Action is to enhance cooperation with China on climate change by continuing to support China in building up a nationwide ETS contributing to reducing its GHGs. More specifically, the EU-China ETS project serves two **main objectives**:

- **Establishment and reinforcement of a policy dialogue between China and the EU on the development of emission trading in both constituencies**. The aim is to increase the mutual understanding of relevant developments affecting the effectiveness and efficiency of emission trading systems in the EU and China.

- **Support China in building its national ETS.** The project intends to support the Chinese counterpart in building the technical and regulatory capacity of emission trading to authorities, industry representatives and verifiers in China.

According to the ToR of the project, the **expected results** of the EU-China ETS project are the following:

Result 1: Establishing and maintaining a regular policy dialogue on emission trading including the establishment of an alumni network to facilitate the exchange of experience gained from training, capacity building and knowledge sharing sources; and facilitating joint research of Chinese and European experts on issues related to the roll-out of the CN ETS.

Result 2: Significantly enhanced capacity of China to operate a nationwide ETS through capacity building, training as well as sharing knowledge and experience with Chinese emission trading experts that are in charge of building up the necessary capacity among government officials and industry representatives to run the CN ETS (training-of-trainers).

Result 3: Sufficiently enhanced familiarity of Chinese industry representatives to handle day-to-day actions required under an ETS by developing tailored-made software responding to the country needs and training a critical mass of industry users.

Consolidated annual meetings of the Project Steering Committee (PSC) are to be held to guide and steer the capacity building, training and knowledge sharing components of the project including the necessary coordination with other activities carried out under the project, and a review mechanism allowing flexibility and resource reallocation according to the actual needs of Chinese stakeholders.

In order to achieve these results, according to the ToR, the project has **four components with different activities**:

e) **Policy Dialogue (Component A)**: Serving the goal of increasing the mutual understanding of relevant developments affecting the effectiveness and efficiency of emission trading systems in the EU and China, the project supports:

   - The establishment of an **EU-China Platform for Policy Dialogue on Emission Trading.** Its main activity is an annual political dialogue event.
   - The set-up of a **network of Chinese ETS experts and joint research (JR) and internship activities between EU and China**.

f) **Technical Training of Local Authorities (Component B):** In order to support the Chinese counterpart in building the technical and regulatory capacity on emission trading, the Action provides for **direct training (rather than, as initially designed, a training-of-trainers (ToT) approach) to a critical mass of provincial-level officials mainly from Environmental Protection Bureaus (EPBs)** to improve their understanding of the CN ETS and their capacity to support ETS-related administrative and regulatory activities.

g) **Industry Capacity Building (Component C):** In order to establish a critical mass of industry representatives that are able to handle day-to-day requirements of a national ETS, **direct, screen-based training of industry representatives** has been held throughout China.

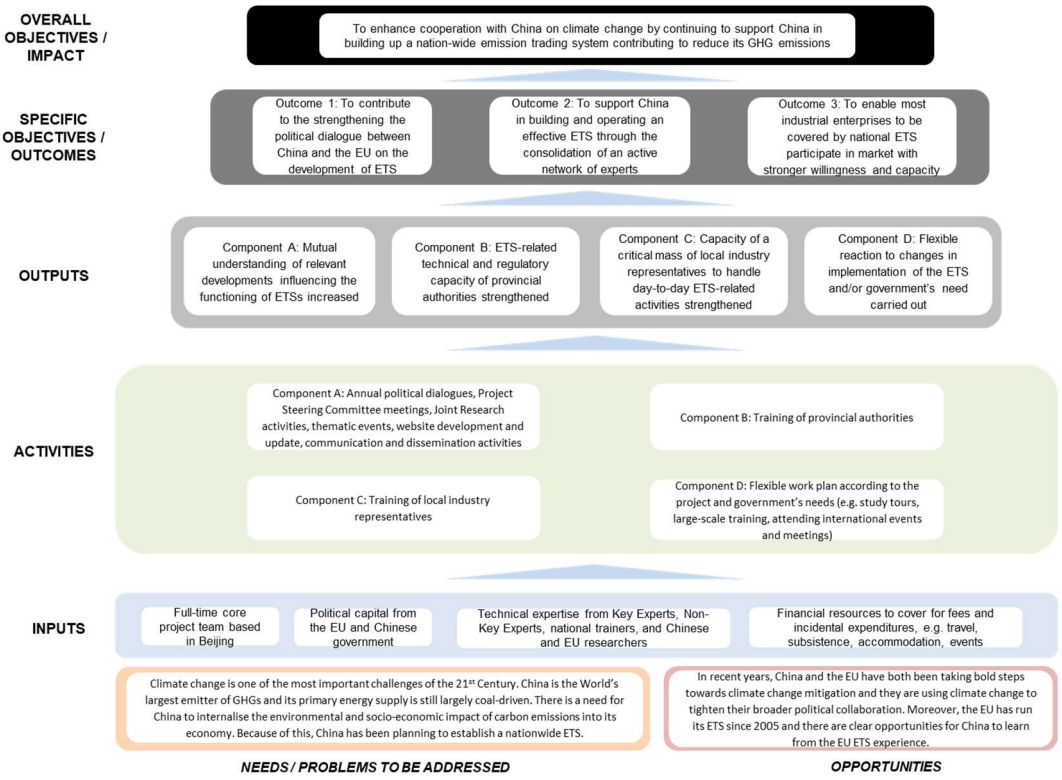
h) **Other Activities (Component D):** In order to provide a sufficient amount of flexibility to react on changes in the implementation of the national ETS and/or international developments, space is left for additional measures such as study tours, other forms of knowledge sharing etc.

Inputs to the Action are: (a) **A full-time core project team based in Beijing**, that is provided by the project contractors; (b) **Technical expertise** from Key Experts, Non-Key Experts, national trainers, and Chinese and EU researchers; (c) **Political capital** from the EU (mainly DG CLIMA and FPI) and the Chinese government; and (d) **Financial resources**. According to

the 4th Interim Report (August 2020), the financial resources allocated amounted to EUR 9,999,907 to cover the total costs of the project. Up-to date numbers on the actual spending until August 2020 have to be gathered during the Interview Phase.

Based on the above, **the Intervention Logic or Theory of Change (ToC) of the project appears to have been well-structured and supported by adequate assumptions.** As the project team has not produced a graphical representation of the ToC, the ET has done so. The graphic reconstruction of the programme's ToC is provided in Figure 1 without key assumptions for space reasons. The full ToC with key assumption is included in Annex 5.

Figure 1: Summary of the Intervention Logic



Source: Evaluation Team.

2. Answers and findings to the evaluation questions

Below, a summary of the main findings in relation to the evaluation criteria and questions is provided. The full list of evaluation questions is provided in the Evaluation Matrix in Annex 4. In Annex 9, a summary of the answers to the evaluation questions (EQs), judgement criteria and indicators is provided.

2.1. Problems and needs (Relevance)

EQ1 – PROBLEMS AND NEEDS (RELEVANCE): TO WHAT EXTENT THE EU-CHINA ETS PROGRAMME (HEREAFTER "THE PROGRAMME") ADDRESSES IDENTIFIED PROBLEMS AND NEEDS?

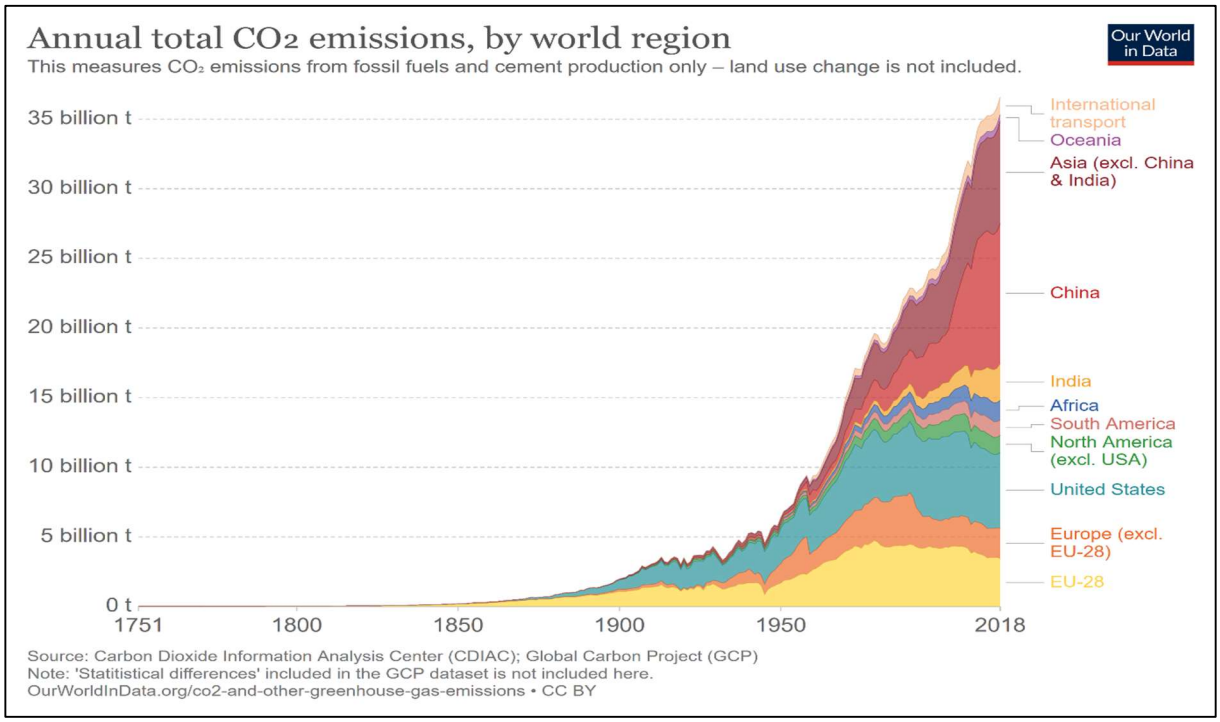
Evaluation sub-questions: To what extent are the programme priorities in line with the sectoral policies and the programming / strategy documents adopted in the EU and China in the climate sector and in particular on emissions trading? To what extent is there coherence and complementarity with the MoU on ETS signed between the EU and China? Are the activities and outputs of the programme consistent with respectively the overall and specific objectives of the programme? Were the key stakeholders and target groups selected for institutional capacity building relevant to address the programme's priorities? To what extent did external factors or context changes during the programme implementation (a) positively or (b) negatively impact the relevance of the programme for its key stakeholders and target groups?

2.1.1. Relevance to the needs and priorities of China

2.1.1.1. Overarching relevance

China is the **world's largest emitter of CO_2.** (BP, 2020). With 58%, China's primary energy supply is still largely coal driven. However, this share already dropped significantly compared to about 72% ten years ago. Looking at the regional disaggregation of CO_2 emissions over time, Figure 2 below shows that China's share in global CO_2 emissions steadily increased since the late 1970s. Only over the last few years, China's share has started to stabilise.

Figure 2: Development of CO_2 emissions and their regional disaggregation (1750-2018)



Source: Our World in Data.

Since the United Nations Conference on Environment and Development (UNCED) in Rio in 1992, one of the main **difficulties in reaching global environmental agreements has been the role of developing countries, in particular China, in climate change mitigation**. In fact, although historical emissions were largely caused by industrialised countries, an increasing share of current and future emissions are largely caused by developing countries, with China on top. For example, the initial exclusion of developing countries for quantitative emission reduction targets was one of the key reasons that led to the United States' refusal to ratify the Kyoto Protocol in 1997.

It took more than 10 years, until 2014, for China to agree to make commitments on the limitation of its GHG emissions, paving the way for the Paris Agreement of the UNFCCC in 2015. In January 2010, as a **party to the UNFCCC Copenhagen Accord**, China committed to reducing its carbon intensity by 40-45% below its 2005 level by 2020. In 2015, this goal was updated to 60-65% by 2030. In June 2015, China formally submitted its Intended Nationally Determined Contribution (INDC) to the **global climate agreement in December 2015 in Paris**. In detail, China committed itself to the following actions by 2030:

- Peaking of CO_2 emissions around 2030 and making best efforts to peak early;
- Lowering CO_2 intensity by 60 to 65% from the 2005 level;
- Increasing the share of non-fossil fuels in primary energy consumption to around 20%; and
- Increasing the forest stock volume by around 4.5 billion cubic meters from the 2005 level.

In order **to achieve these goals to reduce CO_2 emissions, China needs effective environmental policy instruments**. **A cost-effective way to reduce GHG emissions is the establishment of a domestic ETS**.

According to the **MoU on ETS signed between the EC and the MEE** in 2018, there is **need for enhanced cooperation** between the two parties against the background of the roll-out of the national ETS in China and the revisions of the EU ETS in order to combat climate change. Both sides acknowledge the urgency of addressing global climate change and the importance of the 2015 Paris Agreement. Both parties regard emissions trading as a cost-effective tool to contribute to a low-carbon economy and to induce related innovations and deployment of low-carbon technologies (EU Commission and MEE, 2018).

More specifically, in order to effectively and efficiently implement a national ETS in China, various **elements and capacities** are **needed to be in place**, inter alia:

- **Determination of baselines or benchmarks for different technologies and installation sizes in various sectors** of the economy (power and heat generation, iron and steel, chemical industry, pulp and paper etc.). Regulation and market-based measures could be mutually supportive ways to reduce CO_2 emissions significantly in the medium- to long-term. China's national ETS, and particularly its monitoring rules, should dramatically improve the availability and quality of emissions data, which in turn can improve plant operation and emissions management overall (IEA, 2020).
- **Effective monitoring, reporting and verification** of the emission reductions against the benchmarks and central/regional **registration of the allowances**.
- **Administration of the allocation and management of allowances and other issues related to the operation of a CN ETS at the local level**, e.g. in provincial/local EPBs. The chosen allowance allocation, output-based and reliant on benchmarks, will create incentives to increase the efficiency of existing coal-fired power plants. In the short term, the ETS creates an incentive for high-emission coal plants to further improve their CO_2-emission factor, for example by investing to improve efficiency or by burning higher-quality coal. It could also encourage companies to shift generation from less

efficient to more efficient plants within their portfolio. In the longer term, the ETS will motivate companies to shift investments from subcritical (or even less efficient) plants to supercritical and ultra-supercritical plants. In addition, the ETS would favour the phase-out of smaller and less efficient circulating fluidised bed (CFB), high pressure and subcritical coal plants (IEA, 2020).

- **Familiarity of Chinese industry representatives to handle day-to-day actions required under an emission trading system**.

In November 2019, the MEE issued **"China's Policies and Actions for Addressing Climate Change (2019)"**. Relating to the ETS, the MEE stated that measures have to be taken further to steadily push forward the construction of a national carbon market through:

(a) The acceleration of the construction of a national carbon trading system in terms of establishing and perfecting the institutional system, constructing a basic support system, and carrying out capacity building;

(b) Continuing to deepen the construction of pilot carbon markets; and

(c) Pro-actively promoting reform in the trading mechanism for Chinese Certified Emission Reduction (CCER) of GHGs.

Generally, as stated in the document, the basic capabilities to address climate change are being improved and have to continue to be improved (MEE, 2019) by further enhancing the construction of a GHG statistical and accounting system, and strengthening scientific and technological support and disciplined construction.

During his speech to the UN General Assembly on 22 September 2020, the Chinese President Xi Jinping announced two elements in the fight against climate change:

(a) To aim to have CO_2 emissions peak before 2030; and

(b) To achieve carbon neutrality before 2060.

Soon after the pledge, the MEE committed to starting the national carbon market 'as soon as possible'. In early November 2020, the MEE released a draft of the National Carbon Trading Management Measures for public comment. This regulation sets out the responsibilities of municipal-level environmental bureaus, the maximum ratio of offset credits which can be used, penalties for non-compliance, and that the costs of emissions verification will be borne by the government (Slater et al., 2020).

This development further increased the relevance of the EU-China ETS programme for the Chinese government to reduce GHG emissions in a cost-effective way (in detail see Section 2.1.1.2 below).

The IEA suggested that the priorities for China's national ETS implementation should be the following (IEA, 2020):

1. Launch the first compliance period of the ETS for the power sector in 2020, with more stringent benchmark levels and with a single benchmark for conventional coal.
2. Collect unit-level data and encourage units to monitor their CO_2 fuel factors.
3. Adjust and strengthen the benchmark values, taking into consideration 2020 data, including changes in monitored units for the next compliance period.
4. Integrate auctioning to create a useful revenue stream, and use targeted measures to address distributional issues and to guarantee power and heat security and affordability.
5. Define the ETS role, and develop a roadmap and timeline for a multi-step approach to merge benchmarks including other power technologies (Carbon Capture Use and Storage (CCUS), low-carbon and renewables); define CO_2 absolute cap trajectory; and integrate more advanced ETS flexibility mechanisms.

The EU-China ETS programme addresses these needs in China as the programme priorities are the following:

(a) **Increase of the mutual understanding of relevant developments** affecting the effectiveness and efficiency of emission trading systems in the EU and China.

(b) **Support of the Chinese counterpart in building the technical and regulatory capacity of emission trading** to authorities, industry representatives and verifiers in China.

2.1.1.2. Changes of external factors during the programme implementation impacting its relevance

During the implementation of the programme, there were four **main changes in external factors** or context during the programme implementation which (a) positively or (b) negatively impacted the relevance of the programme for its key stakeholders and target groups. These are:

- **The changes in the preferences of the Climate Change Department (CCD) of the NDRC from ToT to direct training;**
- **The shift of responsibilities in the Chinese government on climate change (including ETS) issues.** In 2018, they were transferred from NDRC to MEE;
- **The pledge of the Chinese government to achieve a carbon neutral economy in China by 2060**; and
- **The COVID-19 pandemic** which has had a major impact on political priorities all over the world.

In the following these aspects are assessed in detail.

Changes in the preferences of the CCD to direct training and changes of the responsibilities in the Chinese government on climate change (including ETS) issues

When the programme was designed and the NDRC was the political counterpart of the EU Commission, a ToT approach was foreseen in order to scale up the effectiveness of the programme.

In November 2017, one months after the signature of the contract, there was a change in the leadership of the CCD of the NDRC. In a meeting between the new Director General of the CCD, Mr LI Gao, and the Director General of DG CLIMA in December 2017, following a short-notice cancellation of the PSC meeting envisaged for the same month, the priorities of the project were re-defined from the original ToT approach to direct training. The proponent of this change was Mr Li.

In 2018, the Chinese government was restructured and the responsibilities for climate change policy were transferred from the most powerful government institution in China, the NDRC, to the MEE. At the central level, the CCD of the NDRC simply went to the MEE. However, at the local level, this did not entirely work. In fact, only about 2/3 of the former local DRC staff went to the EPBs (formally under the MEE), whereas 1/3 remained at the local DRCs, possibly because they did not want to leave China's most prestigious government authority for another. This development led to a considerable loss of capacity in the local EPBs with regard to climate change related issues, especially on ETS issues. Because of this, the new CCD's Director General advocated for changing from the ToT approach in favour of a direct training of staff of authorities relevant to the CN ETS, e.g. in EPBs.

The EU-China ETS programme adapted their activities accordingly:

- **Direct training** was made for more than 14.000 Chinese experts from local government authorities and industrial associations, enterprises etc. in different sectors;

- Due to the local needs, the **trainings were held locally**. Consequently, 60-70 trainings have been held by trainers from Beijing (Tsinghua University etc.) as well as from local institutions in almost every province in China.

Pledge of the Chinese government to achieve a carbon neutral economy by 2060

In 2020, the Chinese government announced **to aim to have CO_2 emissions peak before 2030** and to **achieve carbon neutrality before 2060**. To achieve this goal is not only relevant for China's credibility on the international stage, but also for the mitigation of global climate change. Under current policies, according to the Intergovernmental Panel on Climate Change (IPCC) (2014, 2018) the world would be about 2.7 degrees Celsius warmer by 2100 compared to pre-industrial levels (current temperature increase: 1.1°C). **If China were to achieve its new goal, that trajectory would be flattened by 0.3 degrees** (EEAS, 2020)**.** Based on the discussion with the EUD in the Interview Phase, the following reasons for the sudden move of the Chinese government were discussed:

- **Raising ambitions:** The move may not be the result of a scientific or technical assessment, but rather a political move motivated by China's desire to accelerate its economic development, but at the same time realising that to align with the most efficient development model a change from high energy- and carbon-intensive to a low-carbon path is required.
- **Political intentions:** The Chinese government wants to show China is mature as a global super-power, it can deal with global challenges (such as climate change) and can make partnerships. The partnership with the EU is important, even more important since the deterioration of the relationship with the US.
- **Windfall profits:** A low-carbon economy is also an economy with low local pollution. In the short-term, abandoning coal combustion leads to an improvement of local and regional air quality and environment. Probably, the government would have taken these steps even without the pledge related to global GHGs to tackle these other issues.

The establishment of a domestic ETS is a cost-efficient tool to achieve the carbon neutrality goal. Against this background the **relevance of the EU-China ETS programme for the priorities and needs in China has even increased** as the programme supports China to implement the system in an effective way. The EU ETS, which has been successfully operating since more than 15 years, brings about a valuable role-model for the CN ETS. Therefore, the programme is largely demand-driven and effectively reacts on changes of the needs in China.

COVID-19 pandemic

In 2019, first cases of a new Corona virus were identified in December 2019 in Wuhan, China. Official publications from the World Health Organisation (WHO) reported the earliest onset of symptoms as 8th December 2019. Human-to-human transmission was confirmed by the WHO and Chinese authorities by 20th January 2020. Since then, the pandemic spread over the world in different waves. By 24th April 2021, the Johns Hopkins University counts more than 145 million infections and more than 3 million COVID-19 related deaths in the world.

The Chinese government took massive steps to contain the spread of the virus, e.g. through isolating and quarantining the entire City of Wuhan and other mega-cities. These measures:

- On the one hand, massively impacted the daily life and substantial rights of the Chinese population, but
- On the other hand, led to a quick containment of the viral infection and the economic and social recovery in China relative to other parts of the world.

Due to the relatively quick recovery in China, COVID-19 had a certain impact on the political priorities and hence on the relevance of the ETS in China for some time, but the impact was limited.

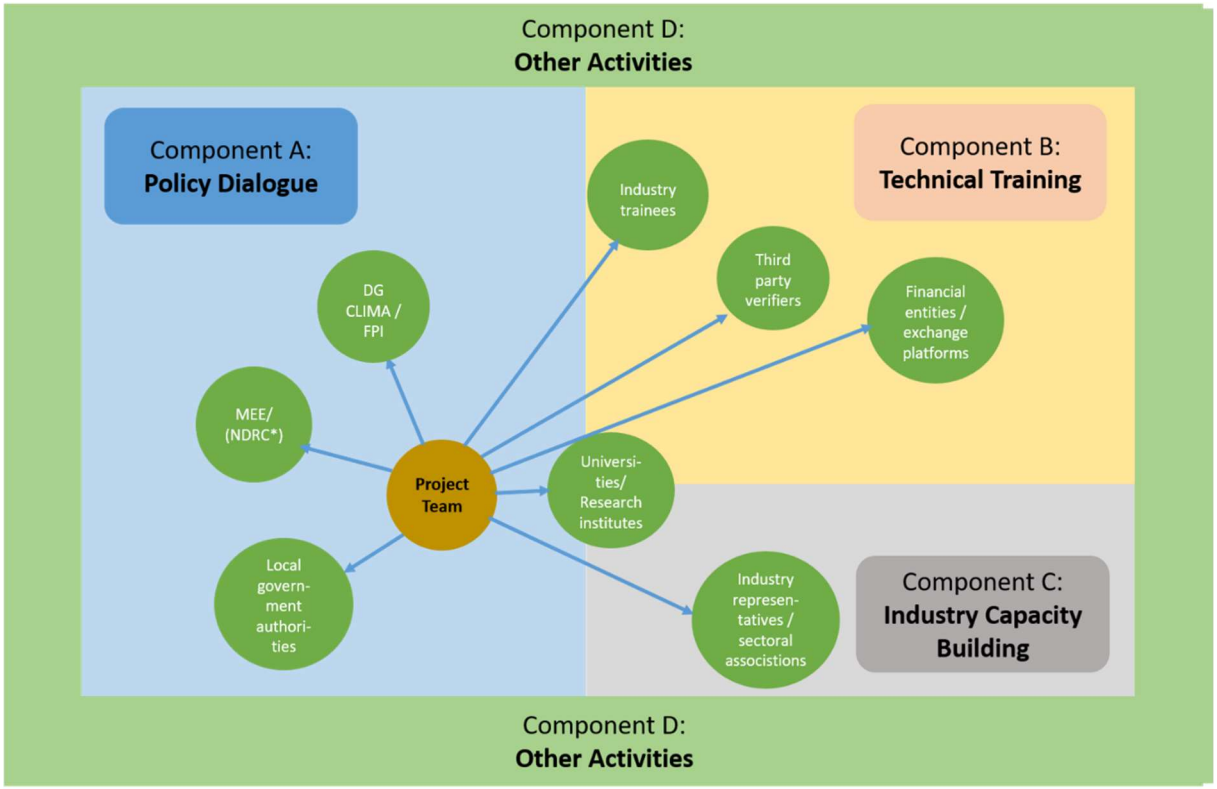
2.1.2. Suitability and relevance of the key stakeholders

The development of a national ETS is a tremendous work involving different stakeholders including national and local government authorities, industry, third-party verifiers, research institutes and financial entities. With its different components, the EU-China ETS project is addressing the following **stakeholder groups** (Figure 3):

- National and local government authorities;
- Research Institutes as trainers of relevant ETS-related skills;
- Industry representatives and sector associations as trainees;
- Third-party verifiers;
- Financial entities such as emission trading platforms.

The evaluation confirms that they are the relevant target groups to be addressed by the EU-China ETS programme intending to (a) establish and enhance a regular political dialogue and scientific cooperation, and (b) support China in developing an effective ETS by building effective capacities on emission trading in the country. Among other, the EU foreign policy objectives include reciprocity, a level playing field and fair competition across all areas of cooperation. The more technical aim of the programme is to enhance the capacities to administer and operate a national ETS in China on a day-to-day basis.

Figure 3: EU-China ETS project stakeholder map



*Source: Own depiction. Note: * NDRC until 2018.*

In the programme, the stakeholders are addressed by different components:

- **Component A: Policy dialogue.** The *MEE (NDRC* until 2018) and other relevant entities at various levels of the Chinese government represent the overall partner of the projects. They work as the competent high-level government authorities to build emission trading across China and having the policy dialogue together with the *EC (DG CLIMA / FPI)* and the *EUD as the relevant contracting authorities*.

Universities / research institutes are the relevant providers of research inputs and outputs. They are in close consultation with the *MEE and local government authorities* as recipients of the research results. The Chinese and European experts were the appropriate target group to facilitate **joint research** on issues related to the roll-out of the CN ETS. Annual workshops were held with members of the JR network to discuss the research results on ETS-related issues such as benchmarking, registration or allowance allocation.

The annual **Project Steering Committee** co-chaired by *MEE and EUD / DG CLIMA* is the relevant authority in charge of steering the effective and value adding implementation of training activities. The PT is acting as PSC meeting Secretariat and is responsible for the organisation of PSC meetings and prepare presentations and meeting documents. According to the project interim reports, the implementation of follow-up actions decided by the PSC meetings is also done by the PT in close cooperation with the MEE.

- **Component B: Technical training.** *Chinese emission trading trainers*, e.g. from universities / research institutes, *third party verifiers, local government authorities such as local and provincial EPBs, and financial entities such as environmental exchange platforms* are actively involved in the project in the direct training approach. Chinese ETS experts as technical trainees include all business sectors and officials from the Chinese administration. They have identified needs for technical training from Chinese emission trading trainers. Furthermore, contents of the training covered all the key building blocks of an ETS, for example cap setting, free allocation, auctioning, trading, MRV, registration as well as presentation and communication skills.
- **Component C: Industry capacity building.** *Representatives from industrial companies and sectoral associations* to be included in the CN ETS are the main target group in this component. They also have identified needs for capacity building to improve the day-to-day handling of the ETS. The capacity building enhances their knowledge of operational tasks of the national ETS.
- **Component D: Other activities.** *Competent authorities from any government level as well as representatives from the industry included* in the CN ETS were targeted in accordance with needs and requirements indicated by the MEE (NDRC until 2018). Their relevant needs were addressed as identified during the project implementation. For example, during the 3rd reporting period, the CCD suggested to assign two experts from the PT to attend the 3rd Carbon Market Workshop under the Florence Process. The project team assigned the Key Expert 3 and mobilised one Non-Key Expert to participate in the related workshop on behalf of the PT in Florence in March 2019. According to the 4th Interim Report, the programme's Non-key Expert Prof. Duan Maosheng presented on the progress of China's national ETS in Shanghai during the visit of the EC Vice President H.E. Mr. Maroš Šefčovič in April 2019. The large-scale training of more than 4,600 people in 2019 was also financed through this component by shifting budget from Components B&C.

The **project contractors** are led by ICF Consulting, with partners SinoCarbon, SQ Consult B.V., Ecofys Netherlands V.B. and others. They are **appropriate project implementers** as they have **relevant key qualifications and experiences in the field of climate change, especially in ETS**:

- **ICF Consulting:** ICF is an international consulting company. The ICF headquarter is in the US, but it has about 70 offices over the world, including one in Brussels and one in Beijing. ICF builds capacity in governments and train businesses to understand carbon pricing strategies and green finance options. Apart from the EU-China ETS programme, ICF also lead the EU programme on ETS in South Korea. The programme directors from China and Korea regularly exchanged their experiences. Very importantly, ICF also led the predecessor of the EU-China ETS programme funded by

the EC DG Development Cooperation (DEVCO), which supported China in establishing the regional ETS pilots.

- **SinoCarbon:** SinoCarbon was founded in 2010 in Beijing and is a leading think-tank in the low-carbon, energy and environmental protection field in China. The company provides services related to policy and standards development to both central government ministries and more than 120 municipal governments. It has engaged in international cooperation projects from both foreign governments and multilateral organizations, including the EU, World Bank and Asian Development Bank. Moreover, as the top emission verification body in China, SinoCarbon has conducted third-party verifications for enterprises regulated under the regional ETS pilots and provided low-carbon and green development strategic management advisory services to numerous large state-owned and multinational groups. As SinoCarbon has various offices all over China, the technical training in Components B and C profited much from this cooperation.
- **SQ Consult B.V.:** Founded in 2009, SQ Consult is a Dutch consultancy firm with a strong international focus. Their experts work on climate, energy and sustainability and combine policy, legal, technical, economic and financial expertise. The company addresses climate change issues at the global, national and local level and its expertise covers carbon market mechanisms, and supporting the international climate negotiations and the resulting implementation provisions, including technology development & transfer and climate finance. It offers good insights into the interactions between different policies and markets and has a strong track record in addressing the needs of diverse stakeholders (public, private, civil, environmental).
- **Ecofys Netherlands V.B.:** Ecofys Netherlands was established in 1984 and started as a research and consultancy firm for energy saving and sustainable energy applications. Since then, Ecofys has carried out numerous research and projects for energy companies, housing corporations, construction companies, governments and end users. With more than 200 employees, it is one of the largest consultancy firms in Europe in the field of energy saving, sustainable energy and climate issues.

2.1.3. Appropriateness of project design and implementation approaches

The EU-China ETS programme is very **relevant to the EU strategic relations with China** as climate change is one of the important EU dialogue fields between the two entities. In the 2019 Communication to the European Parliament, the European Council and the Council "EU-China – A strategic outlook", the EC states that "China is a strategic partner on climate change and the clean energy transition, with whom we need to continue developing a strong relationship, given the sheer size of its emissions (about 27% of global emissions), which continue to rise. Our partnership is essential for the success of global climate action, clean energy transition efforts and ocean governance" (EU Commission, 2019a).

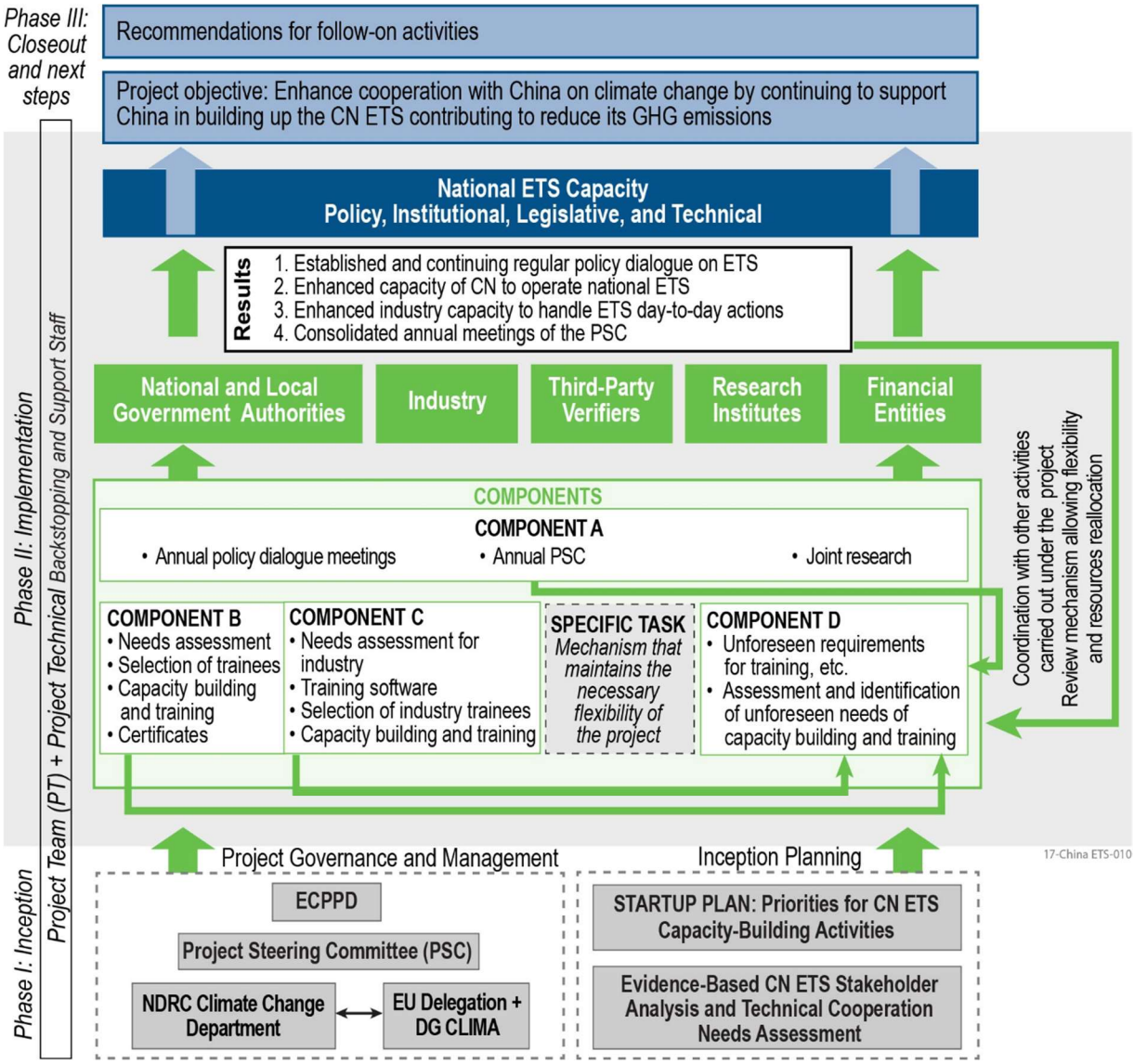
In order to fight climate change more effectively, the EU calls on China to peak its emissions before 2030, in line with the goals of the Paris Agreement. The document stated that "a commitment by China to peak its emissions before 2030 would give new impetus to fighting climate change in line with the Paris Agreement and [….] the EU and China should strengthen their cooperation on sustainable finance, to channel private capital flows towards a more sustainable and climate-neutral economy" (EU Commission, 2019a).

For both, the EU and China, especially emissions trading is an important tool to reduce GHGs in a cost-effective way. For China, the effective and efficient implementation of the national ETS and, consequently of the **EU-China ETS programme**, has become **even more relevant since the government's 2020 carbon neutrality pledge of the Chinese economy** - meaning China's net carbon emissions will reach zero - by 2060.

After the announcement of the 2060 Chinese carbon neutrality target, the MEE is speeding up the development of the CN ETS, with release of a new draft of ETS regulation, as well as other related official documents, for public consultation. As a response, regional governments are raising more actively their demands on capacity building, in particular more municipal EPBs are asking support for capacity building at city-level because their roles have been added into the new draft of the ETS regulation drafted by the MEE.

As for the implementation of the project, the **activities and outputs** of the programme with its four components **(A, B, C, D)** are **consistent with respectively the overall objective to "**enhance cooperation with China on climate change by continuing to support China in building up the CN ETS to reduce its GHG emissions" **and specific objectives of the programme** to (a) establish and continue regular policy dialogue and joint research on ETS, (b) enhance capacity of China to operate the national ETS, (c) to enhance industry capacity to handle ETS day-to-day actions and (d) to hold consolidated annual meetings of the Project Steering Committee (Figure 4).

Figure 4: Key project components and activities flow diagram



Source: Project Team, Second Interim Report.

Particularly, it was a **good design decision to include a Component D** in the programme to be able to adapt to unexpected developments and changes in the framework conditions of the programme. As stated in the ToR, resources initially allocated but not used up under

Components B and C will be made available to Component D, if there is a clear need for training, knowledge sharing, capacity building or exchange of experience that cannot be addressed by Components B and C. For example, this was the case of the **large-scale training in 2019**.

2.2. Sound management and value for money (Efficiency)

EQ2 – SOUND MANAGEMENT AND VALUE FOR MONEY (EFFICIENCY): TO WHAT EXTENT IS THE RELATIONSHIP BETWEEN PROGRAMME INPUTS AND OUTPUTS TIMELY, COST-EFFICIENT, AND TO EXPECTED QUALITY STANDARDS?

Evaluation sub-questions: Is the implementation of the programme activities cost efficient? Are the modalities in place for programme management and implementation efficient, especially considering the Contractor set up, the location of the programme team, as well as the sub-contractors involved? Are the arrangements in terms of monitoring of the activities implemented and of the project overall satisfactory (i.e. useful and practical)? Was the pace of implementation of the project satisfactory according to the budget, timeframe and circumstances prevailing? Considering the inputs used, were the outputs delivered by the programme of the appropriate quality standards? To what extent was the project efficient in increasing dissemination, replication potential and knowledge transfer?

2.2.1. Cost-effectiveness and cost-efficiency in financial and project management

This section presents the evaluation findings about cost-effectiveness and cost-efficiency of the programme. The definitions of "effectiveness" and "efficiency" in this case are taken by the discipline of Value for Money (VfM) assessment, which views cost-efficiency as the ability of a programme to convert its financial resources into outputs, whereas cost-effectiveness looks at the ability of the programme to use its budget as a means to achieve the intended outcomes and impact.

According to the information gathered by the evaluation, the project has been using the available resources in a cost-effective way. The MEE confirmed it has had very good communication with the project team and the overall project management has been effective to their point of view. In particular, **the high level of flexibility in managing the reallocation of the budget between project components to address changes in context and implementation circumstance was one of the keys of success of the project.** Indeed, the project team recognised this had a positive impact on their ability to meet the needs of the Chinese counterpart and the project overall. For instance, in the **extension proposal**, the EU Delegation granted the PT's request to reallocate unspent budget and unused Non-Key Expert days to fulfil activities for almost nine additional months at no extra cost, which is allowing the programme to provide needed support to the Chinese government in the crucial phases leading to and right after the actual start of the national ETS. Another example of cost-effectiveness – but not of cost-efficiency – enabled by FPI's financial flexibility is the transfer of about one third of the incidental expenditure budget to the fee budget at short notice in order to respond to the request by the Chinese government of **large-scale training at the end of 2019**. This example is treated in more detail below, in the part concerning cost-efficiency aspects.

The evaluation also confirms that the project has been managed cost-efficiently. Some examples have been brought up by interviewees in this regard. For example, the **ratio of trainers to trainees** was higher at the beginning and, after careful evaluation, it was reduced in time. However, the main example of cost-efficiency provided was about **savings in training cost** due to the transfer of certain costs to the Chinese government. It was reported that, from the beginning of the project, there was no clear provision of which party would cover which expenses and this led to the project budget being used to cover all training costs, including accommodation, meals, and transportations of government officials and industry representatives attending training events. However, from the EU-budgetary perspective, this

was not cost-efficient. More reciprocity in expense covering was needed. Therefore, it was mutually decided that, since October 2020, EU expenses would only cover venue and expert costs. The evaluation team asked ICF to provide an estimation of the savings incurred due to this change. As they had no information on the price of accommodation and travel of personal trainees in each training, ICF could only give a fairly rough estimation referring to previous trainings paid with EU funds. Based on ICF's estimations, it was assumed **the transfer of some training costs to China have saved roughly EUR 130,000 to the project budget** over 14 trainings delivered under Component B during the period from October 2020 to January 2021. The EU Delegation expects that in the future, e.g. in the next EU-China ETS project, the EU budget will only cover for costs related to the trainers, while all organisational costs, including meals and venues, will be paid by China. These provisions should be agreed upon and clearly stated in a MoU between EU and China before the beginning of the EU-China ETS Project Phase II.

Furthermore, there are two instances to be reported that can generally be considered cost-effective because they indeed served well the pursuit of the project goals, but not very cost-efficient because they either involved major revisions to the budget or a disproportionate attribution of costs to the project. The first case, as mentioned above, is the transfer of a large amount of incidental expenditure budget (about EUR 1.35 million out of EUR 4 million of total incidental budget) to fees at short notice to replenish the exhausted fee budget, due to the need of large-scale training from the Chinese counterpart during October-November 2019. In general terms, transferring incidentals to fees or vice-versa is a procedure that should be exceptional and of minor entity, but on this occasion, it was substantial, and an urgent addendum to the service contract had to be prepared. In hindsight, the original decision by the EU to allocate a high share of the budget to incidental expenditures proofed to be cost-effective as this allowed the programme to have enough flexible financial resources to be used for this large-scale demand-driven activity, which otherwise would have not been possible. In fact, from an administrative point of view, it is our understanding that it possible to move incidentals to fees but not vice versa. The evaluators understand the different needs of FPI and DG CLIMA, respectively of a high degree of certainty in the financial management and planning, and of an effective use of resources to pursue the technical and political goals of the project. Flexibility has been certainly one of the keys of success of this programme and FPI has demonstrated to be a flexible instrument (see also above). However, even flexibility needs to be limited to a reasonable degree. **A lesson for the Phase II project could be to limit the budget allowed to be used under Component D to increase certainty in the financial management. Nonetheless, the cap needs to be carefully set in close discussion with DG CLIMA and in light of the negotiations about financial reciprocity between the EU and China, so that enough funding is allocated for use in demand-driven activities.**

The second instance concerns the fact that some expenses for the large-scale training in late 2019 were shared by the EU with other donors. Although cost sharing could have been considered positive evidence of cost-efficiency, here the EU appears to have covered roughly 80%[2] of the whole financial effort for the large-scale training, which is disproportionately high compared to what other donors have provided. It has to be taken into account that such distribution of costs was not planned as the large-scale training was not an activity included in the project work plan, but rather a request made by the Chinese government to all supporting international partners at short notice. Therefore, although covering a higher share of the training budget than other donors reflected the importance of the EU as key strategic ETS partner of China (i.e. cost-effectiveness), from a financial management perspective, the outcome cannot be considered highly cost-efficient for the EU and more reciprocity should be sought in the future (including in Phase II).

[2] This figure is anecdotal and could not be verified by the ET, although evidence point to the fact that the EU covered the majority of the large-scale training costs.

2.2.2. Efficiency of the project management structure

The programme management structure appears to be adequate to support the achievement of the goals of the project. There is clear and appropriate division of roles and responsibilities among the three PT Key Experts (KEs) according to the Project Components A-C and the lead of DG CLIMA on steering the contents of Project Component D, which is fully demand-driven. There is also evidence that the PT has worked closely with DG CLIMA and FPI as well as with the MEE, and that it benefited handsomely from having a liaison officer between MEE and the project. Moreover, due to the political nature of the project and the clear need for extensive travel within China, it also appears to be important for the PT to be based in Beijing on a full-time basis. Finally, the PT seems to have effectively reacted to the resignation of KE2 due to personal reasons and have provided evidence that his replacement (Qian Guoqiang) has very relevant experience (a CV comparison between the previous and current KE2 has been provided).

2.2.3. Ability to satisfactorily monitor progress in the project delivery

The evidence confirms that the monitoring and reporting arrangements of the EU-China ETS programme seem to be useful and practical. The weekly progress meetings or calls between DG CLIMA, FPI and ICF, were seen as useful in this regard. The frequent regular communication reflected the high importance given by the EU to the project and the need for more frequent updates compared to what generally happens with other projects, for which the updates are usually monthly.

The EU expressed its satisfaction with ICF as a reliable and very professional contractor. They seem to have delivered on time and according to the specification, even complex tasks such the extensive training components. There were no big surprises reported during the implementation and when something was agreed between FPI and the project team, it actually happened. FPI pointed out that the efficiency and reliability of ICF in coordinating with the MEE and other Chinese stakeholders “saved us time and work”.

Despite that, **recurrent delays of ICF in submitting interim reports were reported.** The time for preparation of the Interim Reports increased over the course of the project leading to increasing delays in reporting. The **time between the end of the reporting period and the time of submission almost quadrupled** from the First Interim Report (Oct 2017 – Mar 2018) - Submitted in June 2018: 3 months to the Fifth Interim Report (Oct 2019 – March 2020) – submitted after 12 months. In fairness, it was acknowledged that for the Fifth Interim Report, because of the finalisation of the Terms of References for lumpsum activities, it took time for the EU to validate the timesheets and release the payment. Yet, although these issues were solved in December 2020, the final Fifth Interim Report was only submitted on 16.04.2021. **Despite these delays were reported not to have a relevant impact on the project implementation because, as discussed above, there were other effective ways of reporting on progress, the growing trend in the reporting periods needs to be urgently reversed by the PT to improve the project accountability towards the EU.**

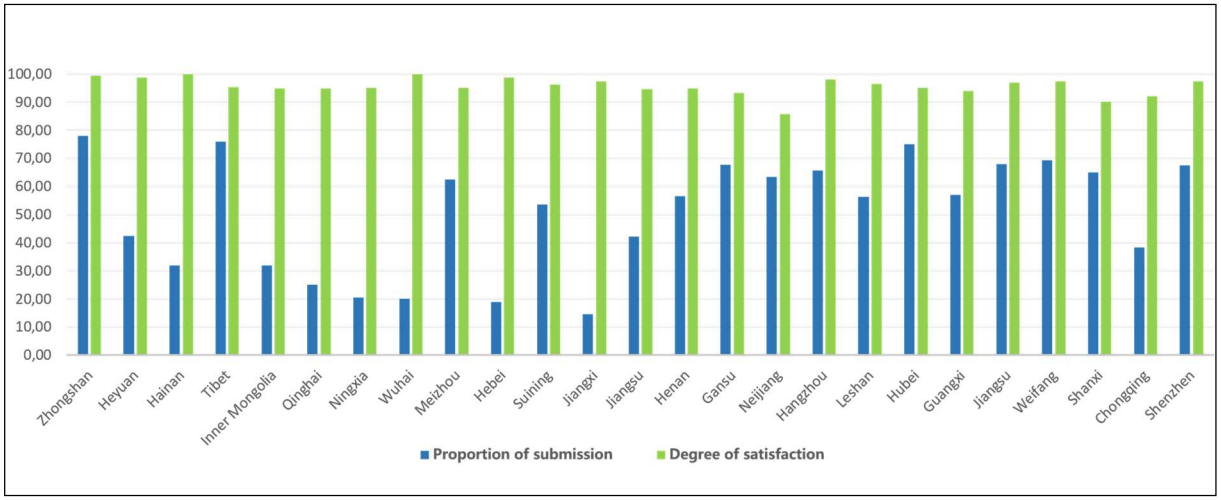
In terms of formal evaluations of the project, due to (a) the restructuring of the Chinese government and reshuffling of the responsibilities for ETS from NDRC to MEE in 2018 and (b) the COVID-19 pandemic since 2019, **no mid-term evaluation was conducted**.

There was **no formal evaluation of the results of Component A** in terms of the political dialogue. The continuation of the dialogue over recent years and the probable continuation in the future provide evidence for success. Formal evaluation of the results of the Joint Research (JR) is done through the third-party referee process for research manuscripts of the researchers in international journals.

The training in Components B and C is evaluated by their stakeholders via post-training feedback forms.

Figure 5 shows the results of the evaluation of the two components by the trainees.

Figure 5: Self-assessed level of satisfaction with Components B and C trainings by trainees



Source: Project Team.

According to the information provided by the PT, averagely, over 90% of the participants were satisfied with the results of the training. There were only small differences across the regions.

In the feedback form, the trainees provided comments and suggestions for improvements for future trainings or similar activities. Box 1 provides some anecdotal examples.

Box 1: Feedback from the trainees of Components B and C

About the training arrangement:

1) The schedule is too tight.

2) Broaden the field of participants to go beyond EPBs.

3) Engage local universities.

4) Print training materials for easier and further reference.

5) Expand the question-and-answer session to encourage more interaction among government representatives, experts and participants.

About the training content:

1) Further tailor the content to the local context.

2) Arrange field visits to be combined with theoretical and practical sessions.

3) More case studies are desirable.

Source: Project Team.

For Component D, in addition to the budgetary check, an evaluation was made by the participants of the large-scale training in 2019, which was financed through this component. Also, according to the PT, the study tour to Germany in November 2019 financed under Component D was evaluated by the participants. Once it was finished, a feedback questionnaire was distributed among the Chinese delegation and analysed. According to the Summary Report of the Study Tour, the organisers and participants were highly satisfied with the outcome of the study tour. Topics that were of special interest to the Chinese delegation included allowance allocation, MRV and lessons learnt from the European experience. As an anecdotal note, one participant from a power generation enterprise stated: “I deeply benefited from this study tour and learned much about the EU ETS, something that can be applied to our carbon management strategy in the future.”

2.2.4. Pace of the project implementation

The pace of project implementation has been reported as irregular or "wavy", with moments of calm and sudden accelerations followed by further decelerations. The three main factors that caused **slow-downs** in the project implementation are:

- **Change in leadership of the NDRC in late 2017, when the project had just started.** This change implied some delays caused by the need of the PT to establish new ties with the new leadership and the physiological time-lapse for the new Director General for climate change to review the project plan. The new Director General concluded, among other things, that the original ToT approach had to be changed into direct training. The pace deceleration caused by the change in the NDRC leadership joined up with the subsequent delays due to the transfer of the climate change mandate from the NDRC to the MEE (see below).
- **The restructuring of the climate change responsibilities within the Chinese government, and in particular from the NDRC to the MEE**. The transfer of responsibilities initiated in March 2018 caused delays in getting the necessary guidance from the government and therefore affected the project implementation up to the first half of 2019, including delays in all four Components. Nevertheless, the project was able to ramp-up the implementation from 2019 and, for instance, to deliver a remarkable number of training events, covering over 10,000 attendees.
- **The COVID-19 pandemic**. The pandemic slowed down the project implementation during the first three quarters of 2020, by impeding the delivery of face-to-face events and meetings. As a consequence, for example, the EU-China Policy Dialogue in 2020 was cancelled, and so were a planned study tour to Belgium and secondment activities. However, the effective response of the Chinese government to the pandemic, coupled with the flexibility of both FPI (by approving the No-Cost Extension) and the PT (by reviewing key activities contents – e.g. switching to virtual events – and schedule) effectively limited the negative impact of COVID-19 on the project results.

In conclusion, the built-in flexibility of the project design (e.g. having Component D), the flexibility in the FPI procedures (e.g. 14-day notice for approving ToRs of new activities, transfer of incidentals to fees, No-Cost Extension), and the credibility built by the PT in the eyes of the Chinese counterparts (e.g. continuity of Team Leader from previous project, KEs coming from the NDRC and/or with pioneering pilot ETSs in China) allowed the project to strongly mitigate the impact of these external barriers.

In contrast, there were three main exogenous factors that implied an **acceleration** of the project pace:

- **The request at short notice to support a large-scale training effort throughout China during October and November 2019.** The request is to be indirectly reconducted to the substantial capacity gap on climate change and emission trading left by the transfer of responsibilities over climate change matters from local branches of the NDRC to EPBs (which represent the MEE locally). In fact, it appears that only about one third of the personnel from local DRCs (who can be assumed were knowledgeable about climate change and the ETS) moved to EPBs, thus implying that up to two thirds of the personnel of EPBs charged with responsibilities over climate change were new to it. To respond to that capacity gap, the government asked international partners to support the large-scale training of local EPBs. The effort from the EU project was substantial and, over two months, it contributed to the training of over 4,000 officials.
- **The pledge of the Chinese government in September 2020 to achieve a carbon neutral economy in China by 2060.** This strong commitment expressed by President Xi Jinping, coupled with the remarks that a national ETS would be a central instrument

to achieve such goal, boosted the interest of local authorities and industries in knowing more about the ETS.

- **The public release by the MEE of the draft national ETS measures in November 2020** (published formally on 5th January 2021 together with the final allocation plan for the power sector). There has been reporting from the PT that since October 2020, i.e. right before the release of the national ETS measures, there has been an intensification of the requests of technical support and knowledge sharing by the MEE to the PT, particularly concerning lessons from the EU ETS.

2.2.5. Quality of the outputs

The project team, the EU and the Chinese counterpart all confirm that the quality of the outputs and the services delivered by the project has been high. Some evidence of this is provided by:

The very positive feedback received by trainees in post-training surveys (over 90% of satisfied respondents, see

- Figure 5);
- The fact that none of the Non-Key Experts proposed by the project team were rejected by the EU, which is evidence they were technically qualified.

It was also communicated that the project team put in place an **effective quality assurance process of the training material**, which included a mid-term selection jointly delivered by the project team and the EU of the best material produced to be used in the future. Based on that, additional guidelines on how to improve future material were also developed.

2.2.6. Efficiency in increasing knowledge transfer and replication potential

In terms of knowledge transfer potential, there is evidence that the PT has been very active in exchanging knowledge with other initiatives in the ETS area. For example, the PT proactively shared updates on the project with other international development partners in China (see more detail in Section 2.3.4). Moreover, it was mentioned that since ICF Consulting ran a similar EU-funded project supporting the ETS in South Korea from 2016 to 2019, they were able to have **regular exchanges with the South Korean project team**. There is also a formal dialogue on ETS between South Korea, China and Japan and the project's KEs participated in that too.

Furthermore, concerning the project's ability to increase dissemination and knowledge transfer to its target groups, there is evidence that there was a learning curve during the project implementation and some key lessons have been learnt. For instance, the PT understood that paper feedback forms during training were not appropriate and they switched to online surveys. The project also developed a comprehensive "Communication, Visibility and Engagement Strategic Plan" (shared with the ET), the adherence to which was high (e.g. see the use of a bilingual website, newsletters, LinkedIn group, WeChat and other social medial communication).

The interview with MEE representatives highlighted the fact that there is **continuity of support by the EU on ETS has been seen as very helpful**. They recognised the consistent support provided by the previous (DEVCO-funded), the present and the future project, which they have seen as building on each other.

The replication potential of the project has been rated high. In particular, the **establishment of two communities of trainers (under Component B and C) and researchers (under Component A)** has been seen as a very important legacy for the future, including further continuation of JR and training in the Phase II project. The project team stressed that it would be important to institutionalise the community of Chinese ETS trainers with formal certifications, so that they will have greater incentives to continue with the training

support in the future and more easily exchange knowledge with each other. This is however for the Chinese government to decide.

The ToT approach appears to be a recommendable solution to scale up the training activities to a scale relevant to the national ETS in China. ToT is currently present in the Action Fiche for Phase II, but this will likely work only if the Chinese government believes in it too. Perhaps, now that there is an established network of ETS trainers, the MEE will be persuaded of the efficiency and effectiveness of ToT compared to direct training.

2.3. Achievement of purpose (Effectiveness)

EQ3 – ACHIEVEMENT OF PURPOSE (EFFECTIVENESS): TO WHAT EXTENT HAS THE PROGRAMME DELIVERED INTENDED OUTPUTS AND ACHIEVED OUTCOMES (BOTH INTENDED AND UNINTENDED)?

Evaluation sub-questions: To what extent has the programme achieved to deliver its intended outputs? What were the main factors influencing the delivery or not of planned outputs? To what extent has the programme achieved its intended outcomes? What were the main constraints and opportunities that influenced the degree of achievement of the programme outcomes? Were there additional outputs and/or unintended outcomes obtained by the programme that were not planned in the project design? Were there geographic differences in the effectiveness of the project to build ETS capacity? If so, what were the key enablers and barriers that determined such differences? Have the behavioural patterns changed in the beneficiary organisations and groups at various levels, and how far have the changed institutional arrangements and characteristics resulted in the planned improvements? What was the impact to the project relevance and effectiveness of the change of responsibilities on CN ETS between NDRC and MEE? How effective was the programme to exchange knowledge and lessons with other initiatives in support of the CN ETS?

Effectiveness is about the ability of the programme to deliver its outputs and their contribution to its intended (and unintended) outcomes. The following elements of effectiveness were tested during the final evaluation: a) the extent to which the programme delivered its outputs; b) the extent to which the programme contributed to its outcomes; c) the main external factors influencing the achievement of outputs and outcomes; d) the effectiveness of the programme to exchange knowledge and lessons within and outside the programme.

2.3.1. Delivery of outputs

This section recounts the evidence gathered about the ability of the programme to deliver its intended outputs. The following narrative is provided according to the project components as well as to the outputs listed in the project logframe.

2.3.1.1. Delivery of the project components

Component A

Component A aims to "contribute to the strengthening of the political dialogue between China and the EU on the development of ETS" (Outcome 1). This outcome has been sustained by delivering outputs for both the organisation of **EU-China Policy Dialogue events** between China and the EU and **Joint EU-China Research** on topics in support of the transition to a fully functioning CN ETS. While the Joint Research output has seen good progress, the Policy Dialogue output has been particularly impacted by the restrictions linked to the COVID-19 pandemic and the government restructuring. Indeed, **so far only one Policy Dialogue event was organised in 2018**, while the Policy Dialogue 2019 was not held due to reasons mainly linked to the government restructuring (4th Interim Report and communication with the PT), and the one in 2020 did not occur because of COVID-19. The next Policy Dialogue is planned in

2021 (no set date yet) and it will likely be held virtually. Despite these setbacks, there is evidence that the political dialogue between EU and China on ETS has continued through other events (e.g. PSCs, meetings in Spain in 2019). Minutes of the PSC meetings also reveal satisfaction with the level of policy dialogue and collaboration by both EU and Chinese parties.

The Joint Research sub-component has been quite prolific, running four Working Groups on:

- **JR1 – Transition from pilots to national ETS**, including sub-groups on "Transfer of allowances from pilots to national ETS", "Transition of other issues (MRV, trading, registry, oversight, governance structures)", "Supplementary role of pilots to national ETS during the transition period". JR1 submitted its findings in September 2019.
- **JR2 – Market Oversight**, which commenced in February 2019 and it was due to be completed in 2020 (to be checked by the ET).
- **JR3 – Benchmarking assessments** for three sectors to be involved in the CN ETS after the power sector, i.e. Iron and Steel, Chemicals (both kicked off in January 2020 and due to be completed by December 2020), and Pulp and Paper (running from December 2020 to June 2021). The originally planned JR3 sub-group on the aviation sector has been put on hold and its resources moved to a new JR4 at the MEE's request.
- **JR4 – "Improvement of the National ETS for Achieving "Carbon Peak" and "Carbon Neutral" Goals"**, which is due to run during 2021. Currently, the PT is working on a paper with the EC to define the research group's scope.

Components B and C

These project components focus on capacity building. In the specifics, Component B aims "to support China in building and operating an effective ETS through the consolidation of an active network of experts" (Outcome 2) through training of officials from the central government and local authorities, whereas Component C aims "to enable most industrial enterprises to be covered by national ETS participate in market with stronger willingness and capacity" (Outcome 3) through training of key industries' representatives throughout Chinese Provinces, also by developing and utilising training software that simulates ETS trading.

Project reports provide extensive information about the training delivered, including dates, locations, number of participants, agendas, and synopses. According to the PT, by the end of 2020, the project has delivered 68 training activities **across China and trained more than 14,000 trainees** from local authorities and key emission industry representatives. This is a remarkable achievement, underscored by the MEE as well as DG CLIMA at the 3rd Project Steering Committee (PSC) meeting. For example, Johannes Enzmann (DG CLIMA) pointed out that "**in the year of 2019, the training activities under this project had covered more than 10,000 trainees across China, compared with about 1,500 trainees during the period from 2014 to 2017, which was the first implementation period of this project"** (PSC3 minutes).

During the PSCs, the quality of the training delivered was praised. At the same time, there have been some suggestions to improve training activities, including: the use of online training, the expansion of the scope of contents (e.g. to cover futures trading) and targeted institutions, and the tailoring of the training material to different audience groups.

Component D

Despite an apparent underutilisation of Component D until September 2019, this flexible component has then funded large-scale training events throughout China during

October and December 2019. According to the project records provided, 17 training events were organised during that period, with a participation of about 4,600 people.

In addition, to date, activities under Component D have also included:

- **A study tour to Germany** in November 2019: The delegation for this 14-days intensive training was composed of 3 officials from the MEE, 9 officials from provincial level EPBs, and 10 selected State-Owned Enterprises. The 22 participants came from 10 different regions, including highly developed regions like Tianjin and Guangdong, as well as least developed regions like Tibet and Xinjiang. Four out of ten enterprise representatives were from power generation sector, while the others covered the iron and steel, aluminium, petrochemical, coal mining and aviation sector.
- Funding the participation of KE3 and one Non-Key Expert (NKE) to attend the Third Carbon Market Workshop under the Florence Process (21 to 22 March 2019);
- The participation of a NKE at an event in Shanghai during the visit of the EU Commission Vice President to present a report on progress of the development of a national CN ETS;
- The organisation of a virtual Joint Workshop on Readiness and Risk Mitigation for the Start-up of CN ETS (October 2020)
- Plans to use Component D funds to translate selected training materials from previous training interventions into English, and to hold a workshop on ETS benchmarks (information to be confirmed when the ET will be able to review the 5th Interim Report);
- And plans to hold a joint event in the context of the official start of the CN ETS (April 2021).

2.3.1.2. Delivery of the logframe outputs

The project logframe in the 4th Interim Report (the latest officially submitted reviewed by the ET) includes 9 outputs. A brief summary of what was delivered under each output is provide below.

- **Output 1: Appropriate visibility of the ETS project.** A detailed "Communication, Visibility and Engagement Strategic Plan" (shared with the evaluation team) was prepared and approved by the EU Delegation in March 2019. The project has been very active in its outreach activities targeting different groups and have delivered:
    - **A bilingual (English and Chinese) project website / knowledge platform** that to date has received over 180 thousand visits from about 103 thousand different people (with unique IP address). The website provides can reasonably called a knowledge platform as it provides knowledge products and training material on a wide range of ETS-related topics. For instance, in the "Training Materials" section of the website, the ET counted 103 different documents published from July 2018 to March 2021. The website is also a source of news about the project activities: on the page "Latest Activities" to date there are 35 articles posted during the period 04th May 2018 - 13th April 2021;
    - **A WeChat group** of training alumni with 4,120 members;
    - **A LinkedIn group** with 405 subscribers;
    - **MS Teams groups** with 64 members from the JR experts.

- **Output 2: Steering provided to the ETS project and identification of topics of mutual interest.** The project has received good steering from the PSC with different stakeholders represented. The project team worked very closely with some of them, for

example in the identification, prioritisation and revision of JR topics. This allowed to find topics of mutual interests between China and the EU.

- **Output 3: Web-based platform for Chinese ETS experts established.** A web-based platform was established on **Microsoft (MS) Teams and made accessible to the JR researchers**, the project team, and DG CLIMA through a password. The confirmed number of participants on the platform is 64. The MS Teams platform was used for sharing draft and working documents and for videoconferences. ICF confirmed the platform was regularly used for meetings by JR groups' members, at least monthly, but sometimes even on a weekly basis when the activities required it. The project also created thematic **WeChat groups that cut across the JR groups**. These were used as discussion forums on relevant topics, rather than working platforms. Due to the success of these platforms, something that is being discussed as an activity in the No-Cost Extension period is forming platforms to bring together the trainers for Component B and C. This could be useful for the sustainability of the project outcomes.
- **Output 4: Enhanced knowledge & engagement on ETS of experts following their participation in annual ETS expert workshops.** Due to the irregular pace of the project (see Section 2.2.4), the **ETS expert workshops were not annual, but rather concentrated in the 2020-2021 period.** In 2020, the project organised a workshop on ETS benchmarking in January and a virtual one in October on ETS readiness titled "Readiness and Risk Mitigation for the Start-up of CN ETS". For 2021, the project team stated they will probably organise 2 or 3 thematic workshops, the first of which will be a workshop on the role of the ETS in meeting the 2030 NDC and 2060 carbon neutrality targets, planned in 2021.
- **Output 5: Joint research papers of Chinese and European experts created.** Professor Duan Maosheng from Tsinghua University coordinated the JR component and the preparation of JR papers submitted by each JR group to the Chinese government (a list of the JR outputs was shared with the evaluators). In JR Group 1 there were sub-group papers that were compiled into chapters of a final paper. The topic treated were: "Research on the Role of Pilot Carbon Market during the Transition Period of the National Carbon Market", "Transitioning of MRV systems, transaction systems, legislation and regulation in the Chinese ETS market", and "Research on the Role of Pilot Carbon Market during the Transition Period of the National Carbon Market". JR Group 2 produced a single paper titled "Research Report on Market Information Disclosure and Oversight Measures of Chinese National Carbon Market", while JR Group 3 has currently prepared two papers: "Developing Benchmarks for the Emission Trading Scheme in China: Benchmarking Report Chemical Industry" and "Exchange on experience of setting benchmark values for iron and steel products in the EU ETS in order to provide insights for the national ETS in China". A third research study on benchmarking in the pulp and paper sector will be produced under JR Group 3 before the end of the project. Finally, the launch of a JR Group 4 is under preparation.
- **Output 6: On-the-job experience gained is transferable to the administration at both central and local level.** This output was ultimately dropped because of the impossibility of undertaking international exchanges due to COVID-19. The possibility of facilitating on-the-job training in Europe (e.g. at the EC Joint Research Centre) was part of the original ToR, but the activity was initially delayed by the government restructuring and by 2020, when COVID hit, it became evident to all parties that it would not have been possible to pursue the plan. Nevertheless, the project was able to attain knowledge transfer to the central and local level in other ways, for example through the study tour, large-scale training and workshops (Component D), training (Component B), thematic events and the involvement of emission exchanges from the pilot ETS cities in JR activities (Component A).

Output 7: Better understanding of ETS regulation and compliance. The project used the number of mobilised people in training as a proxy showing the better understanding of ETS regulation and compliance. The evaluation team believes that this indicator coupled with an indication of the level of satisfaction by participants with the training received is an appropriate proxy to assess the increase in understanding. According to data from the project team, by the end of 2020, the project has delivered 68 training activities **across China and trained more than 14,000 trainees** from local authorities, and key emission industries have been involved in these training activities. As shown in

- Figure 5**, over 90% of them provided positive feedback about the training received**. The qualitative interviews carried out by the evaluation confirm the very high level of satisfaction with the training by trainees.
- **Output 8: Enhanced knowledge of the industry on operational tasks related to ETS.** The figures used are the same as for Output 7.
- **Output 9: Online training software delivered for industrial enterprises.** The project team reported that this output was recently cancelled and the according budget will not be spent. The main reason for the cancellation is that the national ETS rules were only released in late 2020, leaving not enough time to properly procure and deliver the training software and test it on the ground. Therefore, in agreement with DG CLIMA, the output has been dropped.

2.3.2. Achievement of outcomes

The project logframe includes three outcomes:

- Outcome 1: To contribute to strengthening the political dialogue between China and the EU on the development of ETS
- Outcome 2: To support China in building and operating an effective ETS through the consolidation of an active network of experts
- Outcome 3: To enable most industrial enterprises to be covered by national ETS participate in market with stronger willingness and capacity.

A summary of the evidence obtained during the interview phase concerning the project's contribution to achieving these outcomes is presented below.

2.3.2.1. Outcome 1: To contribute to the strengthening the political dialogue between China and the EU on the development of ETS

> "It is clear we've left a footprint in the preparation of the ETS in China." (EU interviewee)

Under its Component A, the programme organised events and research activities in support of the EU-China political dialogue on ETS. **Interviews show evidence that the political dialogue between the EU and China has been strengthened during the period of the project.** The MEE confirmed it is very satisfied with the EU-China policy dialogue on ETS that the project supported. They were very pleased with the level of commitment by the EU to cooperate on climate change, exemplified by the climate change event attended by the new EC Director General of DG CLIMA, his very first foreign mission. They also praised the good level of communication with the project team, the EU Delegation and DG CLIMA at both bureau (technical) and political levels. Likewise, interviewees from DG CLIMA confirmed that the project has been very successful in positively sustaining the bilateral political dialogue on ETS. They described how the programme has been well received and perceived by high political officials in the Chinese government and it is one of main examples in demonstrating there can be good political cooperation with China (despite the problems in other fields).

2.3.2.2. Outcome 2: To support China in building and operating an effective ETS through the consolidation of an active network of experts

The interviews surfaced the fact that when the government restructuring happened in 2018-19, offices for dealing with climate change in the provincial and local EPBs needed to be staffed. However, **at the local level, only about one third of relevant staff transitioned from local DRCs to local EPBs. This meant that a large majority of local staff at EPBs was new to the topic of climate change and ETS.**

MEE stressed how they believe **the project "played a very important role" in building the capacity of local authorities on the ETS.** They mentioned they were very pleased with the ability to respond to their need for large-scale training in 2019 and they emphasised the added value of this project of covering all Chinese provinces. The same is true for **local authorities' trainees** interviewed, who, during the evaluation, consistently claimed that they now **felt confident to both explain the importance of the ETS and to support its operations.** They all linked their confidence to the training received by the project, although the one EPB official from an ETS pilot city interviewed stressed how he already had some established knowledge from that experience. The trainers interviewed remarked that, in their work with local EPBs subsequent to the training, they could see **substantial difference in knowledge of the climate change topic and ETS in the official who took the training compared to those who did not.** Some of the trainees from local authorities interviewed mentioned that they plan to have more internal training and discussion forums on the ETS topic led by those who took the project's training.

At the central level, there is evidence that the project team was respected by the MEE's CCD staff and helped strengthen their capacity on technical matters related to the ETS. There is also some evidence showing how this relationship has been intensifying. For example, since October 2020, when the new rules for the national ETS were released, CCD has been asking feedback from the project team on technical questions several times. In addition, at the last PSC, MEE's Director General stressed the importance of having the project team to interact closely with them.

Many interviewees believe that the project contributed to integrate elements "borrowed" from the EU ETS, but recalibrated to meet the Chinese context. Examples regularly cited were the MRV guidelines and allowance allocation mechanisms (benchmarking). Both EU and Chinese researchers mentioned how they worked well with central and local authorities (e.g. environmental exchanges from ETS pilot cities) and how JR activities were effective in clarifying not only how the EU ETS worked (e.g. benchmarking for iron and steel and chemicals sectors), but also the rationale behind the evolution of technical methodologies and regulations. This was underscored as a clear value added of the project that increased the buy-in of the research outputs by the government.

2.3.2.3. Outcome 3: To enable most industrial enterprises to be covered by national ETS participate in market with stronger willingness and capacity

The MEE expressed its satisfaction with the design and implementation of the training events targeting local industry representatives. They appreciated that they covered both policy areas as well as the day-to-day operations linked with the ETS functioning, including helpful practical exercises.

The interviewees from the private sector (Chinese energy companies and emission exchanges) consistently confirmed that after the training they felt confident to explain the importance and the functioning of the CN ETS. Moreover, when asked if they would be able to operate confidently on the ETS, all interviewees positively answered, although the sample was small (only 4 people) and skewed towards representatives of cities that have participated in the ETS pilots (3 out of 4).

2.3.3. Key external factors influencing the project's effectiveness

Some evaluation questions concerned the positive and negative influence of context-related factors on the effectiveness of the programme. Below is a summary of the main ones sorted by outcome.

2.3.3.1. External factors influencing the EU-China political dialogue on ETS (Outcome 1)

During project implementation, leaderships at the helms of both the European Commission and the NDRC / MEE changed. Especially, in late 2017, the Director in charge of the ETS at the NDRC (later to be moved to the MEE) changed. Although these changes implied some revisions of original work plan, in particular concerning the preference of direct training in spite of ToT, **the political dialogue between the EU and China did not seem to have suffered by such change in political leadership.** The reason can be found in the fact that a well-working Chinese ETS is a mutual interest. In fact, while China has been pointing strongly on having a national carbon market to meet its climate and environmental (e.g. air pollution) agendas, in the long-term, the EU sees it as an instrument to level the playing field in internalising carbon pollution into Chinese products.

Similarly, the launch of the European Green Deal on the one hand, and the Chinese announcement about the 2060 carbon neutrality target on the other hand strengthened mutual interests in supporting a strong Chinese ETS even more. For example, in January 2020 the programme organised a public event on the European Green Deal on the back of the 3rd PSC, while during the interviews it was reported multiple times how the carbon neutrality target had meant an acceleration of the need for training on climate and ETS matters from the central to the local level throughout China.

In terms of key barriers to the promotion of the political dialogue, the transfer of climate change responsibilities to the MEE and COVID-19 appear to have been the main ones. The government restructuring caused serious delays to the project during 2018 and 2019, which led, *inter alia*, to the cancelling of the Policy Dialogue event in 2019 (see Section 2.3.1.1). The pandemic impeded the regular travels of EU officials to China and was the main cause for not holding the Policy Dialogue event in 2020. Nevertheless, the use of virtual meetings and of other venues outside China (e.g. in Spain in 2019) were adequate solutions to keep the political dialogue's momentum. This was also fostered by the knowledge exchange brought about by the JR component, which interviews confirm that it was highly appreciated by the Chinese political stakeholders and researchers.

2.3.3.2. External factors influencing capacity building (Outcomes 2 and 3)

The government's restructuring was definitely the main external factor that influenced the project implementation. The restructuring slowed down the ability by the project to identify the local trainees and their training needs, as the some of the key stakeholders' roles and responsibilities about ETS changed. In addition, as discussed above, the shift in climate change responsibilities created a massive capacity gap in local and regional EPBs. In turn, this required substantial additional resources to be directed to training activities, as it is shown by the budgetary changes required to carry out large-scale training in 2019 (see Section 2.2.1). As the demand for training quickly ramped up after the conclusion of the restructuring, the PT reported the challenges faced in preparing and rolling out multiple training activities in multiple provinces across China (3rd Interim Report) and then during the large-scale training (5th Interim Report). Nevertheless, the project structure proved to be solid and flexible enough, and the planned training interventions were delivered successfully. Ultimately, the evidence shows that the direct training format was conducive to the good outcome achieved in strengthening the capacity of local authorities nationwide, irrespective of the fact that a successful ToT approach is thought to be more effective in the longer term.

In terms of COVID-19, the public health crisis appears to have only halted the capacity building activities during the first half of 2020, but the successful containment of the pandemic in China allowed the programme to accelerate the training subsequently. This delay is partly the reason behind the request for the No-Cost Extension, which includes provisions for 18 additional training interventions of regional governmental representatives (Component B) and 10 additional training interventions of industrial representatives (Component C) on overall ETS issues during the period October 2020 to June 2021.

The evaluation interviews also probed if geographical origins influenced the effectiveness of training events. The evidence collected shows that, as expected, **trainees from those cities which were part of ETS pilot schemes generally felt more confident in understanding and operating in a national ETS. This is also true for power sector companies**, which were the main operating companies in pilot ETSs and are the first ones to be included in the national ETS.

2.3.4. Effectiveness in knowledge exchange

The evaluation interviews highlighted that the project team has been very effective in promoting knowledge exchange both within the programme and with other initiatives.

The communication within the JR component seems to have been effective although it was affected by COVID-19. For example, Chinese researchers from the JR group 1, which took place in 2019 before the pandemic, reported a high degree of satisfaction about the exchanges with their EU colleagues. However, researchers from JR group 3, which worked mainly during 2020, reported that COVID-19 affected internal communication in two ways: (a) it prevented in-person meetings, which did not allow for personal bonding among researchers, and (b) it shortened the research timeframe, which did not allow for as many join meetings as originally planned. Nevertheless, EU researchers confirmed that the exchanges were very useful as now they understand the Chinese context (and working culture) much better.

The project also organised inter-group knowledge exchanges between JR groups, although they appear to have been mainly limited to the sub-group under the same JR topics. For example, regular and intense cross-group exchanges were reported among sub-groups of JR group 1 (transition from pilot to national system) and sub-groups of JR group 3 (benchmarking in the iron and steel and chemicals sectors). Instead, exchanges among members of different JR groups were reported to have been merely kept to a social level, rather than professional.

In terms of external knowledge exchange, the project team has been very proactive in talking and engaging with others supporting China in ETS. They are a very active member of a core group of ETS-supporting initiatives including the World Bank, ADB, GIZ, Norway, EDF CIFF, NCSC, which regularly share with each other updates on the implementation of their projects and activities. They do not meet according to a fixed schedule, but on average every few months. For example, they met 3-4 times during 2020 and more often in 2019, before COVID-19. This group is additional to the environmental group that the EU has with the Member States. **The exchange of information with the other initiatives appears to have been broadly effective in avoiding duplication of work and waste of resources.** An example of such good communication happened during the 2019's large-scale training, which involved the coordinated contribution of the EU project together with GIZ and Norway.

In addition to attempting the coordination of project implementation with other ETS-supporting partners, from the documents reviewed, **there is evidence that the project has been active in promoting the dissemination of project outputs and knowledge on ETS matters with other entities and initiatives.** For instance, the project organised a two-day industry-to-industry dialogue on China's ETS to prepare State-owned Enterprises for compliance and trading. The event was co-organised with the International Emissions Trading Association (IETA) Business Partnership for Market Readiness (BPMR) platform. There is also evidence

that the PT positively engaged with another EU-funded programme, the "EU-China Energy Cooperation Platform" (ECECP), targeting the energy sector.

2.4. Achievement of wider effects (Impact)

EQ4 – ACHIEVEMENT OF WIDER EFFECTS (IMPACT): WHAT EVIDENCE IS THERE THAT THE PROGRAMME HAS CONTRIBUTED TO ITS INTENDED IMPACT?

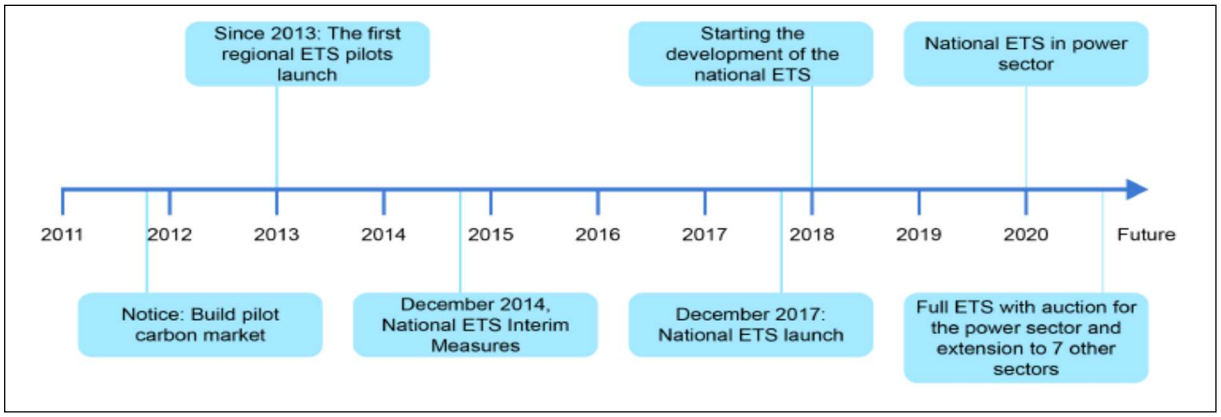
Evaluation sub-questions: Considering the situation at the beginning and at the end of the programme, to what extent it contributed to enhancing cooperation with China on climate change by continuing to support China in building up a nationwide ETS as a means to reduce its GHG emissions? Were new institutional / governance or management practices on ETS applied on the side of China during the time of the project? Has the project had a direct influence on those? Has the programme been able to promote EU and/or international standards and regulations relating to the climate sector and ETS?

2.4.1. Enhancing cooperation with China on climate change by continuing to support China in building up a nationwide ETS as a means to reduce its GHG emissions

2.4.1.1. Positive impact in helping China to realise its NDC and its long-term low-carbon strategy to achieve carbon neutrality by 2060

In 2017, the NDRC drafted and released the official guidelines for constructing a national ETS after approval from the State Council. The work plan consists of a gradual transition to a full ETS over three phases. The first phase focuses on constructing market infrastructure. The second phase is a trial run for the power sector to test out the ETS. The third phase (post-2020) is the launch of a full ETS with auctioning of allowances for the power sector, while gradually extending to other sectors (Figure 6).

Figure 6: Timeline of emission trading in China



Source: IEA, 2020.

The domestic ETS **could become a major climate policy tool to help China realise its NDC and its long-term low-carbon strategy to achieve carbon neutrality by 2060**.

The project has positively contributed to the appropriate design of the ETS and the building of the national capacity to run the CN ETS as it, inter alia, has supported China to:

- Determine appropriate allocation mechanisms with feasible baselines in power generation, iron and steel, pulp and paper industries;
- Determine an effective monitoring, reporting and verification of the achieved CO_2-emission reductions; and

- Supporting the formulation of relevant legislation and regulation of the ETS market.

A functioning CN ETS will help to achieve the NDCs and China's long-term low-carbon strategy to achieve carbon neutrality by 2060. The CN ETS starts only with power generation, later including other economic sectors such as iron and steel, chemical industry, pulp and paper industry etc. Coal-fired power plants account for about 50% of China's CO_2 emissions from fossil-fuel combustion. Reducing emissions from coal-fired power plants will therefore be essential to reach China's low-carbon goals, and these plants will be the key sources covered by the ETS.

Managing the existing coal-fired power fleet to reduce emissions will be key to China's clean energy transition and achieving the emission reduction goals. Emissions could be reduced by:

- Better plant management;
- Retrofitting of plants, including with CCUS; and
- Retiring inefficient power plants before the end of their expected lifetimes.

Any newly built coal capacity will make a successful clean energy transition harder to achieve as it leads to a decrease of the ETS benchmark and fewer allowances created. China is still planning to build new coal capacity for various reasons such as to provide jobs, increase local economic growth, provide flexibility for greater integration of renewables, as well as satisfy heat demand while improving the efficiency of its existing fleet of combined heat and power (CHP) plants. One option to manage emissions reductions is to match each new coal capacity addition with a retirement plan for old and less efficient units, to keep a balance of zero net coal capacity additions.

2.4.1.2. Positive impact on maintaining a regular policy dialogue on relevant issues of the national ETS

During the project implementation period, the EU-China ETS programme **had positive impact on maintaining a regular policy dialogue** on emission trading between China and the EU and **facilitating joint research of Chinese and European experts** on issues related to the roll-out of the Chinese nationwide ETS (intended outcome for Component A). According to the new EU strategy on China, depending on the policy field, China is seen as a **negotiating partner, competitors or systemic rival** (EU Commission, 2019a). As for climate change and ETS, China and the EU are strategic partner. As for climate change, the ETS is at the top of priorities. The European Commission and the MEE held their first policy dialogue on emissions trading in Beijing on 26th April 2018, following the launch of China's nationwide carbon trading system. In 2019, there was no policy dialogue due to various difficulties, and in 2020 the policy dialogue in China was cancelled due to COVID-19. However, policy dialogue between the EU and China took place in other forms such as in meetings on the side of the UNFCCC Conferences of the Parties. According to the Draft 5th Interim Report of the EU-China ETS programme, on 13th December 2020 an EU Green Deal Public Event was co-hosted in Beijing by the EUD and Energy Foundation. The public event presented and elaborated on the European Green Deal and explored opportunities to enhance EU-China collaboration. It also addressed the common challenges facing the European Green Deal and China's 14th Five-Year Plan and mid-century strategy. Among the 150 participants were representatives of MEE, NDRC, DG CLIMA, EUD, embassies of some EU Member States, representatives from pillar industries and international donors, experts from national think tanks of China, Chinese researchers and practitioners, and youth leaders of climate change. In the first quarter of 2021, a formal online policy dialogue is planned.

In the EU-China ETS programme, European experts and selected Chinese experts **undertook joint research.** Three joint research groups were established (JR1 – Transition from pilots to national ETS; JR2 – Market Oversight; JR3 – Benchmarking assessments). A fourth group JR4 - "Improvement of the National ETS for Achieving "Carbon Peak" and "Carbon Neutral" Goals" will be established in the first half of 2021. Their goal is to combine the in-depth

knowledge they have of carbon markets both in Europe and worldwide with an understanding of China's regional ETS pilots and the overarching domestic political and economic context. A broad group of stakeholders have also been consulted during the research. Based on this work, they provided policy recommendations on critical issues relating to the transition from regional pilots to the national ETS. In this sense, e.g. the EU-China ETS programme research on the determination of benchmarks for different technologies and different installation sizes is an important support for an effective allowance allocation in the national ETS.

The **findings and outcome of the research activities** have been **submitted to MEE**, the main ministry responsible for the ETS and increased its understanding on relevant issues on the roll-out of the domestic ETS, including the following ones:

- The 2020 China carbon pricing survey (Slater et al., 2020) implemented by the PT brought about various insights to the expectations of the ETS stakeholders, inter alia:
    - Carbon emissions trading is expected to increasingly affect investment decisions;
    - The average price expectation in the national carbon market starts at RMB 49/t in 2020, rises to RMB 71/t in 2025, and RMB 93/t by 2030;
    - The vast majority of respondents expect that the COVID-19 crisis will have no effect on China's broader climate ambitions (44%) or will actually increase the level of ambition (43%). For the effect of COVID-19 on global climate ambitions, the responses were very mixed, with a slightly higher share of respondents (39%) expecting a decrease in ambitions;
    - 80% of respondents expect China to achieve the carbon emissions peak by 2030, and 36% expect China's emissions to peak by 2025 or earlier.
- Research results of the JR Working Groups (see Section 2.3.1.2).

Both EU and Chinese researchers mentioned how they worked well with central and local authorities (e.g. environmental exchanges from ETS pilot cities) and how JR activities were effective in clarifying:

- How the EU ETS worked (e.g. benchmarking for iron and steel and chemicals sectors); and
- The rationale behind the evolution of technical methodologies and regulations.

This was underscored as a clear value added of the project that increased the buy-in of the research outputs by the government.

According to the Draft 5th Interim Report of the EU-China ETS programme, subgroups 1 and 2 of JR Group 3 had been kicked off in January 2020, studying options for the benchmarks for the iron and steel and chemical sectors, and helping these two sectors get ready for joining the national ETS during the 14th Five-Year Plan period (2021-2025). JR Group 2 provided preliminary findings and recommendations on market information disclosure in an exchange with the MEE on regulations related to the ETS to be taken into account in the forthcoming legislation by policymakers. **However, according to the evaluation interviews, unfortunately the recommendations provided by the project team found their way only into the draft of the regulation, not in its final version.**

2.4.2. Application of EU and other new institutional / governance or management practices on ETS applied on the side of China during the time of the project

According to the interviews with the Chinese and European researchers, there was considerable **impact provided by the programme to promote EU and/or international standards and regulations relating to the climate sector and ETS**. According to information provided by the PT, it includes:

- ETS Pilots Registry and preparation of the establishment of National ETS Registry (operation, maintenance and security related aspects);
- ETS Pilots MRV Systems and preparation of the Establishment of National MRV System (monitoring plans). E.g., for the iron and steel sector, the EU ETS MRV approach was used as a major reference source. The Californian system was analysed as an alternative approach as it is using continuous monitoring. In the end, the CN ETS is using a similar accounting approach as in the EU ETS;
- ETS Pilots Allocation System and preparation of national ETS allocation system (benchmarking allocation + auction). At the beginning, the Chinese authorities thought about the grandfathering approach (allocation based on historical emissions), but after intensive exchanges with the EU colleagues, the Chinese researchers understood that it would not be very wise to use grandfathering. So they suggested the benchmarking approach to the Chinese authorities.
- Coverage of Aviation Sector;
- Discussions about market stability reserve (MSR) mechanisms.

All activities under this project were designed to share and promote EU best practices and share the latest version of its regulations**.** For instance, the EU ETS MRV System refers back to international standards and especially to EU Regulations, such as the Monitoring and Reporting Regulation (MRR) and the Accreditation and Verification Regulation (AVR). To promote administrative efficiency and a harmonised approach across China, elements have been borrowed from the EC references to:

- Monitoring plans;
- Annual emission reports; and
- Verification reports.

All in all**,** the project contributed to integrate elements from the EU ETS, but recalibrated to meet the Chinese context, e.g. MRV guidelines and allowance allocation mechanisms (benchmarking).

2.5. Likely continuation of achieved results (Sustainability)

EQ5 - LIKELY CONTINUATION OF ACHIEVED RESULTS (SUSTAINABILITY): WHAT IS THE LIKELIHOOD THAT THE OUTCOMES WILL BE SUSTAINED AFTER THE END OF THE PROGRAMME'S FUNDING PERIOD?

Evaluation sub-questions: To what extent has the programme built the basis for its benefits to continue after its end? What are the major factors influencing the potential sustainability of the programme? What key lessons can be learnt to the benefit of future EU actions in support of the CN ETS (e.g. EU-China Policy Dialogue on ETS II)? And to the benefits of other existing initiatives? How likely are the results of the joint research projects to be sustained after the end of the programme? Is there evidence showing the Chinese industry trainees are capable of enhancing the capacity of Chinese ETS stakeholders without the programme's support?

The EU-China ETS programme covers three years from 2018 to 2020 to deliver three kinds of results / benefits to China, i.e. (1) the establishment and maintaining of a regular policy dialogue on emission trading and facilitating joint research of Chinese and European experts on issues related to the roll-out of the Chinese nationwide ETS, (2) significantly enhanced capacity of China to operate a nationwide ETS, and (3) a sufficiently enhanced familiarity of Chinese industry representatives to handle day-to-day actions required under an emission trading system. **Strong evidence exists that the outcomes of the Programme will be sustained after the end of its funding period in 2021 and even beyond** due to the following observations:

- The EU-China ETS project team and the EU programme representatives agreed on a **No-Cost Extension** work plan until June 2021;
- A **second phase** of the Platform for Policy Dialogue and Cooperation between EU and China on Emissions Trading is planned to run from the end of 2021 to the end of 2023;
- There are various ETS issues to be worked on during China's 14th Five-Year Plan (2021-25) and **need for a sustained political dialogue**;
- **Joint research activities are likely to be sustained in the future**;
- **The technical trainees of the EU-China ETS programme seem to be able to maintain their capacities to operate a nationwide ETS** and capacities of the Chinese industry and industry association representatives seem to be sustained to handle day-to-day actions.

These aspects are analysed in detail in the following pages.

2.5.1. Agreement on a No-Cost Extension of the programme until June 2021

The EU-China ETS project team and the EU programme representatives agreed on a No-Cost Extension work plan until June 2021. The work plan was lastly updated in December 2020 and includes the 2021 Policy Dialogue and continuation of the activities in Component B and Component C as important milestones for the remaining project duration.

Table 1 shows the proposed work plan for the Components A-D in 2021.

Table 1: Proposed work plan 2021 Components A-D

Component A

Proposed activity	Deliverable	Timing of delivery
A-1: Joint virtual workshops to create momentum for the "EU-China Policy Dialogue Meeting 2021"	2-3 joint virtual workshops/ meetings that provide opportunities for policy makers in EU and China to exchange information and reach mutual understanding, and reinforce the cooperation on emission trading related issues	Meeting 1: Jan 2021 Meeting 2: Q2/Q3 (TBD) Meeting 3: around COP26 (TBD)
A-2: EU-China Policy Dialogue Meeting 2021: High Level workshop on « China's Carbon Peak » and « Carbon Neutrality Target" (working title)	At least one high-level virtual dialogue on ETS, focusing on the role of ETS in achieving "Carbon Peak" or "Carbon Neutral" goals (possibly a series of meetings)	22nd of Mar 2021 (TBD)
A-3: The 4th Annual Project Steering Committee Meeting	A virtual PSC meeting to discuss and agree on 2021 workplan	Feb 4th 2021
A-4: Joint Research of Sub-group 3: *Pulp and Paper*	Recommendation report on pulp and paper benchmark for allowance allocation in ETS	From Feb to Jun 2021
A-5: Joint Research of Group 4: link allowance allocation with achievement of China's 30-60 carbon reduction target	Recommendation report on improvement of allowance allocation Recommendation report on contribution and cap setting of industrial sectors	From Feb to June 2021

Component B

Proposed activity	Deliverable	Timing of delivery
B-1: organise 6-8 trainings for regional governmental representatives on overall ETS knowledges, updated policies, regulations and guidelines: • Organise physical/virtual trainings for regional governmental representatives. • Prepare training materials and consulte with MEE and host regional government. • Deliver the training courses including course design, selection of trainers and trainees, invitations, agenda preparation, and other logistics issue etc. • Collect feedback from trainees for the improvement and follow-up.	Demand-driven training courses 以需求驱动的培训课程 Well-prepared trainings presentations 重复准备的培训材料 Enriched trainers pool 扩大的专家讲师团队 Summary reports of training activities 培训活动总结报告	From Jan to Jun 2021

Component C

Proposed activity	Deliverable	Timing of delivery
C-1: organise 3-5 trainings for regional enterprises representatives on overall ETS knowledges, updated policies, regulations and guidelines, as well programmatic skills: • Organise physical/virtual trainings for regional governmental representatives. • Prepare training materials and consulte with MEE and host regional government. • Deliver the training courses including course design, selection of trainers and trainees, invitations, agenda preparation, and other logistics issue etc. • Collect feedback from trainees for the improvement and follow-up.	Demand-driven training courses 以需求驱动的培训课程 Well-prepared trainings presentations 重复准备的培训材料 Enriched trainers pool 扩大的专家讲师团队 Summary reports of training activities 培训活动总结报告	From Jan to Jun 2021

Component D

Proposed activity	Deliverable	Timing of delivery
D-1: as response to the demand of MEE, organise several virtual trainings towards provincial ecology and environment bureaus, focusing on newly released national ETS regulation, allowance allocation guideline, and MRV regulation.	Virtual training sessions on specific substance Well-developed training materials	From March to Jun 2021 (indicative)
D-2: as response to the demand of DG CLIMA, organise a joint event in the context of the official start of the Chinese ETS, in the celebration of formal operation of Chinese ETS, to invite representatives from government, think-tank of both EU and China, to share their celebration of launch and insights on how to leverage this important moment for global climate actions.	A joint hybrid event to celebrate the official start of Chinese ETS Presentations and panel discussion in this event	TBD

Source: Project Team.

The No-Cost Extension builds the basis for a smooth transition from Phase I (2017-2020) to Phase II (2021-2023) of the EU-China ETS programme and hence plays an important role for its sustainability.

2.5.2. Agreement on a second phase of the Platform for Policy Dialogue and Cooperation between EU and China on Emissions Trading until 2023

According to Annex 5 of the Commission Implementing Decision on the 2020 Annual Action programme for the Partnership Instrument (EU Commission, 2020), there will be a **second phase of the Platform for Policy Dialogue and Cooperation between EU and China on Emissions Trading**. Phase II is planned to start in the 4th Quarter of 2021 and will have a duration of two years. Overall objectives of this project are to continue the EU-China cooperation on emissions trading, drawing on EU lessons from the EU ETS and thus contributing to promoting a level playing field. The project will **support China to widen and deepen the domestic ETS by additional sectors in order to build a larger and stronger**

multi-sector ETS. The enlarged ETS provides an incentive to more actors in China to reduce emissions and allows for more low cost abatement through access to a larger market.

Lessons learnt from the previous developments are the following (EU Commission, 2020):

- **To establish a national ETS is a complex and challenging task**. It requires the support that the EU and other donors can provide, especially given the size of China and need to establish a new market and supporting infrastructure.
- **Flexibility is important.** The speed of development is influenced by external factors e.g. the re-structuring of the Chinese government in 2018 delayed the ETS implementation and led to significant new training needs as new people across China became responsible for ETS delivery. Local DRCs did not transfer all those previously trained and involved in ETS to the Local Environment Bureaus along with the transfer of responsibility for climate action. The existing EU-China ETS project also has developed an increasingly important role for joint policy research and exchanges with Chinese government experts. More new demand for policy exchanges and research can be expected as China starts the implementation of the national ETS and issues arise from operation.

There is considerable long-term demand for the ToT approach to allow essential expertise to be shared with a wider number of people. This is essential given the size of China and to ensure sustainability. Against the background of the results of the interviews with the Chinese stakeholders, the direct training approach should be maintained to a certain extent, maybe also including cities.

As for the design of the programme, it builds on the same four components as the current one to meet the planned objectives. It will have the same four major components:

- Component A: EU – China Platform for Policy Dialogue on Emission Trading
- Component B: Capacity building for trainers ("Training-of-trainer" concept).
- Component C: Capacity building for industry.
- Component D: Unforeseen policy research and exchange needs and training requirements for industry representatives and authorities.

2.5.3. ETS issues to be worked on during China's 14th Five-Year Plan (2021-25) and need for a sustained political dialogue

Against the background of the 2030 and 2060 targets, China's 14th Five-Year Plan (2021-25) provides time to deal with the most important future issues of the national ETS, **the roll-out of the ETS to other economic sectors and GHGs as well as the evolvement to a real cap-and-trade system with absolute emission restrictions goals.**

The 14th Five-Year Plan also provides a good opportunity to guide coal power development in line with the government's concept of "ecological civilisation" (Hansen, Li, and Svarverud, 2018; Jin, 2008). Measures to be considered include more stringent energy consumption targets for the coal fleet in operation and for newly built units; large-scale retirement of old and less efficient high pressure and subcritical plants; defining goals and targets for the national ETS with more ambitious benchmarks; and accomplishing reform of the power market. In the literature related to the establishment of the national ETS, different flaws of the system are identified (Wang et al., 2018; Wang, Liu and Pu, 2018; Mu et al., 2018) which should be addressed throughout the 14th Five-Year Plan:

- **Accuracy and credibility of China's emissions data, especially showing significant inconsistencies between the national and provincial emissions inventories**, while facility-level data are even less satisfying;

- **Institutional capacities related to the carbon market need to be further enhanced to strengthen MRV capabilities**. This is especially the case as the Chinese ETS will further expand in terms of sectors and GHGs covered;
- Compared to emissions trading programs in other parts of the world, such as the EU ETS, **China's programme is likely to face greater market volatility**, mainly due to the lack of liquidity on the market that is likely to prevail, to a smaller extent due to the country's economic structural transition from a manufacturing-based to a service-based economy. Wise cap-setting and allowance allocation methods and proper price containment mechanisms are needed to maintain market stability. Liquidity may only be improved under an absolute cap in combination with a reform of the electricity sector. This is a design flaw of the Chinese ETS rather. The EC should take this into account relating to its long-term policy regarding its support for the ETS in China;
- In China's planned market economy, **large state-owned enterprises (SOEs) in the energy sector in various cases do not act as independent profit-maximizing entities**. As possible losses are covered by the government, their risk related behaviours could undermine the efficiency of a cap-and-trade programme which is discussed in the time of the 14th Five-Year Plan.

The policy dialogue on ETS between the EU and China will be maintained after the project end as there is political commitment to ETS by the Chinese government at a high level. There is need for sustained political dialogue as the Chinese ETS will further expand both in terms of emission certificates traded in the current scope of the ETS as well as in terms of an integration of other economic sectors in the ETS. The following risks and mitigation actions were identified for Phase II of the EU-China ETS programme (EU Commission, 2020):

- **Overlaps with projects from other donors:** Informal coordination with other donors to avoid overlaps, which are rather unlikely due to the size of China and the scale of capacity building needs; Component D introduces the necessary level of flexibility to avoid overlaps;
- **Successful emission trading in China requires stronger coordination across Ministries:** This risk is real, but cannot be influenced (or only at a very limited extent) from outside. At the same time, ongoing reforms of the electricity market are encouraging and seem to alleviate this risk;
- **Change of political direction making emissions trading a less important policy in China:** The CN ETS drew global attention to China. Therefore, it is unlikely that such a dramatic shift of political direction will happen;
- **Emission trading in China is a dynamic process entailing unforeseen developments:** In-built flexibility allows adapting the project to new requirements.

2.5.4. Sustained research activities

As **sound research co-operation seems to have been established between the European and Chinese researchers in the field of ETS**, JR activities are likely to be sustained in the future and further deepen and expand the scientific cooperation between Europe and China. In the No-Cost Extension phase until June 2021, research topics are proposed, responding to the demand of the MEE, and selected Chinese and European experts are working together on these selected topics to provide applicable solutions and feasible recommendations. According to the 2021 PSC Meeting in February 2021, for 2021, the following activities are planned under Component A of the programme:

- A-1: Joint virtual workshops to create momentum for the "EU-China Policy Dialogue Meeting 2021";

- A-2: EU-China Policy Dialogue Meeting 2021: High Level workshop on "China's Carbon Peak" and "Carbon Neutrality Target" (working title);
- A-3: The 4th Annual Project Steering Committee Meeting;
- A-4: Sub-group 3 of the JR Group 3: Pulp and Paper;
- A-5: JR Group 4: link allowance allocation with achievement of China's 30-60 carbon reduction target.

These topics together with the ETS issues mentioned above for the 14th Five-Year Plan provide a solid basis for sustained EU-China research activities on ETS in the future.

2.5.5. Sustained capacities of the trainees and trainers

The **technical trainees of the EU-China ETS programme seem to be able to maintain their capacities to operate a nationwide emissions trading system.** A sound basis has been laid to be ready to successfully work in a further broadened and deepened domestic ETS in China in the coming years. The Interview Phase provided enough evidence to substantiate this claim. Following the same rationale, also the **capacities of the Chinese industry and industry association representatives seem to be sustained to handle day-to-day actions** required under an ETS in the future as the domestic ETS is further rolling out. Here as well, the Interview Phase provided enough detailed evidence.

2.6. EU Value Added

EQ6 – **EU VALUE ADDED**: WHAT ADDITIONAL VALUE HAS THE PROGRAMME PROVIDED COMPARED TO SIMILAR ACTIONS CARRIED OUT BY EU MEMBER STATES?

Evaluation sub-questions: To what extent has this programme shown EU added value considering its main objectives? What additional value have been brought by the specific features of this programme as opposed to one carried out by single EU Member States directly? What additional value have been brought by the specific features of this programme in comparison to other initiatives in support of the CN ETS?

The evaluation investigated the EU Value Added by asking questions on two main aspects: (a) the EU added value compared to having the project delivered by single EU Member States; and (b) the EU added value within the EU-China ETS project compared to other donor-funded initiatives supporting the Chinese ETS.

2.6.1. EU Value Added compared to single EU Member States

The EU Value Added is particularly evident in this project and it is mainly related to:

- **The clear value from learning from the EU ETS;**
- **The size of the EU compared to single Member States;**
- **The availability of a larger pool of ETS experts and expertise;**
- **The centrality of the European Commission in the EU climate diplomacy;**
- **The high political relevance of this project for both the EU and China in the context of broader international relations.**

From the interviews and the documents reviewed, there was consistent evidence that all different groups of Chinese stakeholders see a clear value from the project in learning from the EU ETS. First of all, as the EU ETS is run at the regional level and not at the Member State level, this project has a very high level of credibility in the eyes of China. From the Chinese perspective (sources PSCs' minutes and interviews), it is evident that, since

the national ETS is so central in the Chinese climate change strategy, the possibility to learn from the EU's experience in designing and delivering the different phases of the EU ETS is considered highly valuable by the Chinese government. This is a very specific value provided by this project that could not have been provided by others. This is even truer, as the MEE underscored, because the EU ETS has been in place since 2005, which provides a very long period from which to extrapolate lessons. Secondly, some of the Chinese researchers appreciated the possibility of producing cutting edge research based on the EU ETS experience. For example, the research on benchmark setting for the iron and steel and chemicals sectors had never been carried out in China before.

Interviews also brought up some limited instances when a national perspective actually brought value to the joint research. For example, some climate-related policies at the national level can be useful as examples of specific solutions for the Chinese ETS, e.g. the case of carbon contracts for difference (CCfD) from Germany. A member state perspective can also be useful when comparing specific national policy debates because there may be more similarities between China's governance settings and EU Member States than with the EU.

The size of the EU compared to a single MS definitely played a factor in delivering value added to the project stakeholders. The size of the EU enhanced the authoritative voice of the political dialogue compared to single Member States. In fact, the EU may sometimes be conceived by Chinese (and other countries) as the United States of Europe. Therefore, although some EU Member States may enjoy a very good reputation in China, the EU's size and prestige made the project being more highly considered. Moreover, the multi-level governance of the EU ETS, that is having the system run at the EU level over very diverse national markets, is similar to what will happen with the Chinese ETS in relation to the nationwide system to be operated over very diverse Chinese provinces. Finally, in more practical terms, the size of the EU is also closer to the size of the Chinese market than any other single EU Member State. This made having more comparable case studies and examples from the EU ETS easier, than for example from Norway or Germany.

Stakeholders reported appreciation for the availability of a larger pool of ETS experts and expertise due to the EU's direct involvement in the project. This is reasonable to expect because of the pioneering role of the EU in global carbon markets for almost 20 years and the much bigger size of the EU compared to its Member States. In particular, Chinese researchers confirmed that having the EU as scientific counterpart gave access to a larger base of experts and expertise compared to what would have been possible with a national project. Additionally, the EU can generally count on larger financial resources compared to single Member States, which is proven by the much larger budget of the EU-China ETS project than other international initiatives supporting the Chinese ETS.

In terms of EU value added, it was brought to the attention of the evaluators that **the centrality of the European Commission in EU climate diplomacy** played a role in delivering it. The EU climate policy is developed and decided in Brussels, not at the Member State level. The same can be said for the EU climate diplomacy. In fact, the EU speaks with a single voice at the UNFCCC. Therefore, the European Commission is a more credible international interlocutor on climate change than single Member States. Also, Member States have low incentives in having bilateral climate cooperation. For example, it was reported by the PT that when the United Kingdom (UK) was still part of the EU, it used to fund some small-scale (roughly GBP 100,000 over 2 years) activities in support of ETS in China under their Prosperity Fund. However, after the previous phase of the EU-China ETS project started, the UK stopped funding its bilateral ETS activities in China around 2015 because they acknowledged that the EU project was able to tackle the needs of China at local and central level in a more cost-effective way. Although this happened during the predecessor of this project, the example is representative of the cost-effectiveness of the EU-driven support on ETS compared to a single Member State.

Importantly, **this project was able to deliver such high EU value added because it had high political relevance for both the EU and China in the context of broader international relations**, particularly strong in the area of climate change. Indeed, China and the EU have both been taking bold steps towards climate change mitigation (e.g. EU 2030 Strategy, EU Green Deal, China's 13th and 14th Five-Year Plans, China 2060 carbon neutrality announcement) and they seem to be using climate change to tighten their broader political collaboration. This project has particular value for the EU because it is consistent with the EU goal of taking the leadership in global climate action, particularly since the last US administration had decided to leave the Paris Agreement. The project has been central to ensuring China is in the position to achieve its mitigation goals, which is crucial to address climate change globally. Moreover, since in China there is evidence of higher political acceptability of climate action and responsibility than before (e.g. see the carbon neutrality announcement in 2020), the Chinese government can gain value from learning from the political discourse in Europe around the EU ETS role in the European Green Deal. For example, China has now requested a joint research group and a political workshop to discuss the role of the CN ETS in achieving the carbon neutrality goal.

The fact that the project is mutually high in the political agenda is evidenced by the reference of this project on TV by the EC President Ursula von der Leyen (EU Commission, 2020a). In addition, the participation of DG CLIMA representatives at workshops and training events delivered added value in showing China how seriously the EU believes in their climate cooperation.

2.6.2. EU Value Added compared to other ETS-supporting initiatives

The evaluation underscored some treats of this EU-funded project that added value compared to initiatives funded by other donors.

First of all, there seem to be a basic difference between this project and other projects funded by **Multilateral Development Banks** (MDBs) (e.g. World Bank, ADB). These institutions tend to run North-to-South type projects, e.g. delivered through direct payments in the form of loans or grants, and the classic consultancy model whereby international experts deliver their support or knowledge to the receiving country. Unlike MDBs, this FPI project is based on a partnership delivery model, involving principles of financial reciprocity, joint research between EU and Chinese researchers, peer-to-peer political dialogue, the use of national trainers. In addition, this approach implied a much higher degree of flexibility and adaptive management than MDB-funded programmes, which suited very well the demands of the Chinese counterpart.

Another key difference from this project and other initiatives funded by MDBs is that **the EU is an ETS implementer**, so it can provide first-hand ETS experience to China, which changes substantially the credibility of the source of knowledge. In other words, while MDBs can illustrate lessons from the EU ETS because they have studied it, the EU can bring direct experience in designing and running the system. **This turns the relationship into a peer-to-peer one, or in this case ETS implementer-to-ETS implementer.** The impact that such a project can have is plausibly bigger.

Furthermore, when compared to the others, this project has been **the only national scale project supporting the ETS in China.** All other projects have been reported to have had a much narrower geographical focus. There is evidence that, with the exception to some extent of the GIZ project, the other international donors and partners have been providing only very limited support to China on ETS. For example, one interviewee defined them as "ad hoc activities, rather than dedicated projects".

Finally, **this is the only ETS project that involved peer-to-peer joint work between western and Chinese experts.** In fact, while in other projects (for example in the Norwegian one), the Chinese side is the one that usually delivers the research, in this project both sides have been intensively involved in it. In addition, there was a very clear division of labour between EU and Chinese experts: while EU experts would review and explain the lessons and

experience from the EU and other international systems (e.g. California), Chinese researchers would provide a local view on how to adapt those lessons to China based on the domestic context.

2.7. Coherence of the Action

EQ7 – COHERENCE OF THE ACTION: HOW COHERENT AND COMPLEMENTARY IS THE PROGRAMME WITH OTHER INTERVENTIONS IN CHINA IN THE ETS AREA?

Evaluation sub-questions: To what extent is the programme coherent with the EU Green Deal, the EU strategy in China and the EU sectoral approach in ETS / the climate sector? What coherence and complementarities exist with other EU Member State actions in China? What coherence and complementarities exist with other initiatives in support of the CN ETS? To what extent the programme coordinated its strategy and activities with those of other initiatives in support of the CN ETS? If yes, to which?

2.7.1. Coherence with the European Green Deal, the EU strategy in China and the EU sectoral approach in ETS / the climate sector

A first EU-China cooperation project on emissions trading was carried out between 2014 and 2017 to support the pilot phase and it was renewed in 2017 by the current project. Based on the results of the preceding programme, the current EU-China ETS programme increases the mutual understanding of relevant developments affecting the effectiveness and efficiency of emission trading systems in the EU and China, and supports the Chinese counterpart in building the technical and regulatory capacity of emission trading to authorities, industry representatives and verifiers in China. Thus, it is coherent with the **EU policies regarding climate change mitigation including the evolvement of the EU ETS** against the background of enhanced GHG emission reduction goals:

- To overcome these challenges of global climate change and local environmental degradation are an existential threat to Europe and the World, the EU and its Member States developed the **European Green Deal**. According to the Green Deal Communication of 11th December 2019, its aim is to transform the European Union into a modern, resource-efficient and competitive economy with zero net emissions of GHGs by 2050, economic growth decoupled from resource use, people's health and quality of life improved, while leaving no one behind (EU Commission, 2019). The European Green Deal covers all sectors of the economy, notably transport, energy, agriculture, buildings, and industries such as steel, cement, information and communication technology, textiles and chemicals. Among them, the **energy-intensive industry sectors** are covered by the **EU ETS.** As an Annex of the European Green Deal Communication, the EU provides an action plan to boost the efficient use of resources by moving to a clean, circular economy, and to restore biodiversity and cut pollution. The action plan outlines investments needed and financing tools available (EU Commission, 2019).
- As part of the European Green Deal, in September 2020 the Commission proposed to **raise the 2030 GHG emission reduction target**, including emissions and removals, to at least 55% compared to 1990. The former key targets for 2030 were (a) a minimum of 40% cuts in GHG emissions (from 1990 levels), (b) at least 32% share for renewable energy and (c) at least 32.5% improvement in energy efficiency. The 40% GHG target is implemented by the **EU ETS**, the Effort Sharing Regulation with Member States' emissions reduction targets and the Land use, land use change and forestry Regulation. In this way, all sectors will contribute to the achievement of the 40% target by both reducing emissions and increasing removals. The **revised EU ETS Directive** will apply for the period 2021-2030 (Phase 4 of the ETS). It will be enabling this through

a mix of interlinked measures and looking at the actions required across all sectors, including increased energy efficiency and renewable energy. The EC shall start the process of making detailed legislative proposals by June 2021 to implement and achieve the increased ambition. The aim is to enable the EU to move towards a climate-neutral economy and implement its commitments under the Paris Agreement of 2015 by updating its NDC.

- In April 2019, the **8th China-EU Energy Dialogue** was held, and NEA and the European Commission signed a Joint Statement on the implementation of China-EU Energy Cooperation, emphasising the significance of clean energy cooperation for the implementation of the Paris Agreement (MEE, 2019).
- On her speech at the Climate Ambition Summit on 12th December 2020, **EC President Ursula von der Leyen** stressed that the EU wants "to work with all those who agree that we must put a price on carbon. We are ready for more ambitious commitments with like-minded countries. We are supporting developing countries, to help them decouple their emissions and their economic growth". In her speech, she hence at least indirectly **made reference to the EU-China ETS programme** (EU Commission, 2020a).

2.7.2. Coherence and complementarities with other EU Member State actions in China

The EU-China ETS programme is also **complementary to programmes / projects of single EU Member States in China in the field of ETS**.

The largest programme of this kind is the German GIZ programme **"Capacity building for emissions trading schemes (ETS) in China"**. According to GIZ, the programme was implemented from 2012-2019 and was commissioned by the German Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety (BMU). The lead executing agency in China was the MEE. Cooperation partners in China were the DRCs in the ETS pilot regions, regional carbon markets and institutions. The **main objective of the Action** was to enhance the key Chinese institutions' knowledge, resources and political leverage required to develop and operate an emissions trading scheme at local and national level. The project provided specialist advice and training to government institutions in the pilot regions, dealing with the following aspects of emissions trading:

- Market design and surveillance;
- Regulation and legislative framework;
- Definition of emissions caps;
- Allocation mechanisms; and
- Trading platforms and carbon registries.

The GIZ programme explicitly referred to how the exchange of experiences with German and European institutions plays a substantial role assisting the development of a strong CN ETS. **Activities of the GIZ programme** included:

- Assisting the development and adaptation of technical regulations for measuring and reporting on GHG emissions in a range of sectors in Shanghai and Shenzhen;
- A report on the first year of trading in Shenzhen, containing an analysis, policy options and recommendations, which was submitted to both the local and the national government. The experiences from Shenzhen are reflected in the planning process for the national scheme;
- Intensive training of representatives of Chinese provincial authorities in emissions trading in Germany in preparation for the national ETS roll-out.

During the Interview Phase, **additional projects have been identified from EU Member States**. The main ones are the following:

- Carbon Pricing Survey funded by the **Norwegian Embassy in Beijing**, the Environmental Defense Fund (EDF) and Energy Foundation China, which is implementing the China Carbon Forum;
- Carbon Market study project funded by the **Norwegian government**;
- The **UK government** also used to fund some activities on emission trading in China under its Prosperity Fund, although these were terminated around 2015 (see Section 2.6.1).

2.7.3. Coherence and complementarity with ongoing non-EU programmes/projects in China in the field of ETS

The EU-China ETS programme is also **coherent with and complementary to ongoing non-EU programmes / projects in China in the field of ETS.**

The most prominent donor was the **World Bank**. From 2013 to 2020, the World Bank's **Partnership for Market Readiness (PMR)** supported the design of China's ETS by mobilising international experience and expertise, *inter alia* through:

- 23 research projects on different issues;
- capacity building programs for more than 13,000 participants; and
- baseline data collection of key provinces and cities.

Among the research topics, the PMR analysed whether China should allocate allowances using an absolute or a rate-based approach (sector benchmarks). For China, strategic plans and local conditions meant that it decided to use a rate-based approach to set clear carbon intensity benchmarks to power generation facilities defined by capacity (below or over 300 MW) and fuel types to incentivise the more efficient producers. Industrial sectors typically have various products, which will require a richer set of benchmarks of the sub-sectors to facilitate industrial restructuring. The benchmarks are set to be updated on a regular basis. (Huang et al., 2020).

Phase 2 under the World Bank **Partnership for Market Implementation (PMI) programme** is also supporting China in the design and improvement of its carbon market development policy portfolio. It aims at (a) supporting China in the development and implementation of carbon pricing instruments to meet their NDC targets and long-term de-carbonisation strategies; (b) assisting China in the operationalisation of Article 6 of the Paris Agreement, which would facilitate international cooperation on carbon markets and promote the convergence of national carbon pricing instruments; (c) assisting China in identifying and implementing best practice approaches and, where relevant, helping them achieve compatibility in design with other carbon pricing efforts and markets; (d) informing the national and international policy discussions on GHG mitigation by sharing lessons learned and providing a platform for collective innovation on carbon pricing instruments; and (e) developing a comprehensive knowledge-base on carbon pricing instruments and market mechanisms (World Bank, 2019).

The **Asian Development Bank (ADB)** also funded a Carbon Market Study Project named **"Improving the Design of the National Carbon Emissions Trading System"** with USD 750,000. The project is being implemented from October 2018 until September 2021 (ADB, 2021). The intended programme outcome is the improvement of the CN ETS policies on allowance management and market oversight. The institutional counterpart of the programme is the CCD of the MEE to ensure delivery of the project's outputs. According to the project data sheet, the project outputs are the following (ADB, 2021):

- Policy recommendations on allowance management and market oversight measures of the national ETS developed; and
- Enhanced national capacity in ETS management.

In order to implement the programme, 2 international and 6 national individual consultants have been mobilised.

Carbon market capacity building and researches were funded by the **Children's Investment Fund Foundation (CIFF)** implemented jointly by EDF China and SinoCarbon.

Finally, the EU-China ETS programme is **coherent with domestic Chinese efforts to fully establish a national carbon market** by (a) the acceleration of the construction of a national carbon trading system in terms of establishing and perfecting an institutional system, constructing a basic support system, and carrying out capacity building; (b) continuing to deepen the construction of pilot carbon markets; and (c) proactively promoting reform in the trading mechanism for CCER of GHGs (MEE, 2019).

2.8. Cross-Cutting Issues

EQ8 – CROSS-CUTTING ISSUES: TO WHAT EXTENT HAS THE PROGRAMME CONSIDERED AND SUCCESSFULLY CONTRIBUTED TO CROSS-CUTTING ISSUES, SUCH AS GENDER, SOCIAL INCLUSION AND THE SUSTAINABLE DEVELOPMENT GOALS (SDGS), AND ADHERES TO THE PRINCIPLE OF LEAVE NO-ONE BEHIND AND THE RIGHTS-BASED APPROACH METHODOLOGY?

Evaluation sub-questions: To what extent has the programme team appropriately considered gender equality and social inclusion (GESI) in the programme design and strategy (e.g. through a gender analysis)? How were GESI considerations integrated in the programme implementation? To what extent was the level of integration of GESI in the programme implementation appropriate to the characteristics of the Action (i.e. ETS, climate change mitigation)? To what extent did the programme identify relevant SDGs and appropriately and explicitly devised its strategy to contribute to their achievement? To what extent did the programme adhere appropriately and explicitly to the principle of Leave No-One Behind and the rights-based approach methodology?

As requested by its ToR, the final evaluation assessed the relevance and mainstreaming of cross-cutting issues, which are the three universal values underpinning United Nations' 2030 Agenda defining the Sustainable Development Goals (SDGs) (United Nations, 2021a), into the project design and implementation. These are: gender equality and women's empowerment (broadly related to the concept of gender equality and social inclusion (GESI)), the human rights-based approach (RBA), and the principle of Leave No-One Behind (LNOB).

2.8.1. Links with the Sustainable Development Goals

In reference to the SDGs, there is direct a link between the programme and SDGs 13 (Climate Action) and 7 (Sustainable Energy). The most explicit connection of the project to the SDGs is with SDG 13 which calls for taking urgent action to combat climate change and its impacts. As presented in the Section about relevance (2.1), the project is clearly aligned with EU and Chinese climate change policies and strategies. Moreover, as the power sector is the one currently covered by the Chinese ETS, the project is directly linked to SDG 7 which aims at ensuring access to affordable, reliable, sustainable and modern energy. Certainly, one of the main goals of an ETS targeting the power sector is to internalise the environmental cost of carbon to foster a transition to a cleaner energy system.

The PT clearly showed that they understand these links as they explicitly refer to the SDGs and the Paris Agreement in the training material prepared. In fact, they usually include an element of international and domestic political overview in the presentations to the local governments, which connect the SDG Agenda 2030 with the reinforced climate ambition in China as part of their national interest.

2.8.2. Gender equality and social inclusion, Leave No-One Behind and the rights-based approach

Since 2010, the EU has adopted two successive Action Plans on Gender Equality and Women's Empowerment in external actions (GAP I and GAP II), putting forward the EU's clear commitment towards Gender Equality and Women's Empowerment (GEWE) in all its external actions. As presented in the EC guidance "Evaluation with Gender as a Cross-Cutting Dimension", GESI objectives are an integral part of RBA as "**Gender- and power-neutrality in Development Cooperation and in external action does not exist**: actions impact women and men differently, positively or negatively and their respective powers are key elements influencing this impact" (EU Commission, 2018). The guidance calls for each evaluation to adopt a gender-equality and rights-sensitive approach. The LNOB concept is also inherently linked to GESI and RBA as it implies "combating discrimination and rising inequalities within and amongst countries, and their root causes" (United Nations, 2021b). This evaluation internalised the GESI, RBA, and LNOB elements by including questions to test the project stakeholders' understanding of the importance of GESI aspects in the goals and implementation of this project as well as further discussing with the PT whether and how GESI considerations were mainstreamed into the project.

The evaluation's interview phase fully confirmed the impression from the desk phase that **GESI was not taken into consideration in the project design by either the EU or the project contractors, and it played a very limited role in the project implementation.** Indeed, the only reference to gender in the programme's design is the capturing of gender disaggregation in monitoring data about Output Indicator 1 "Number of participants in an event" since June 2019. However, there has not been a specific target in terms of gender balance to be pursued in project events.

Nevertheless, interviews with ICF highlighted how the project team is conscious of the importance of the topic and the need to do more about it. ICF showed a broad understanding of the GESI concept in general, and in the specific about the project. In general, the project team went beyond the average connection of GESI with gender balance. They explained that as the ETS is aiming to foster a nationwide transition towards clean energy in China by pricing carbon emissions, the project has an obligation to promote and share the understanding of how the energy sector must be more just and leave no one behind, for instance by reducing its reliance on coal mining operations, which involve dangerous working conditions and documented violations of human rights. Indeed, it is important to recognise that ultimate goal of the EU's climate change action (including external actions like this project) is not only to promote a low-carbon transition, but at the same time a *just transition*. For instance, in support to the European Green Deal, the EC has instituted a Just Transition Mechanism, which is "a key tool to ensure that the transition towards a climate-neutral economy happens in a fair way, leaving no one behind" (EU Commission, 2021).

The evaluation found evidence that **the PT has actively discussed and considered GESI mainstreaming in the project.** Indeed, ICF Consulting provided a number of examples in which they showed attempting to mainstream GESI considerations in this and especially other projects, for instance by trying to give public visibility to the high profile of EU and Chinese women at both technical and political levels. The key examples brought up about this project are the organisation of a panel discussion, which was the first all-female panel discussion on the ETS (although the moderator was a male), and the visibility given to female leaders and researchers during respectively the Political Dialogue and the JR groups. The PT remarked that through leading by examples, stereotypes in generally male-dominated sectors such as the ETS and its covered industrial sectors can be proven wrong and broken in the long-term. The ET is aware of at least another ICF-managed project linked to climate change mitigation in which GESI has been strongly mainstreamed. This is the GBP 12 million Green Recovery Challenge Fund (GRCF) component of the UK Partnership for Accelerated Climate Transitions

(UK PACT). Documents viewed by one of the evaluators, who by chance is also part of one of the actors implementing UK PACT, clearly show how ICF has included opportunities for positive impacts for women and marginalised groups among the key criteria to scope the areas of funding for the GRCF. Moreover, all applications to GRCF funding are assessed on their GESI mainstreaming plans, which implies "assessing the implications for everyone (including women, men, sexual and gender minorities (SGM), as well as any excluded groups, on the basis of any factor) of any planned action, including policies or programmes, in all areas and at all levels" (ICF Consulting, 2020a).

UK PACT also produced a guidance for GESI mainstreaming in its funded projects. The guidance is based on understanding the four levels of GESI mainstreaming, illustrated in Figure 7. The document poses the general ambition of UK PACT's projects to GESI empowerment (Level 2 in Figure 7), although it points out how the clear expectation is that "all UK PACT projects must show clearly how they are building GESI into their programming, aiming to achieve the highest level on the [GESI mainstreaming] scale that is possible within their project concept" (ICF Consulting, 2021).

Figure 7: The levels of GESI mainstreaming in UK PACT

Source: ICF Consulting, 2021, UK PACT GESI guidance

By request from the ET, ICF provided additional examples of how they have been pursuing GESI mainstreaming in other climate change mitigation projects they have been managing in China. In Box 2, we present here some highlights from these examples that can serve as potential lessons for the Phase II of the EU-China ETS project.

Box 2: Examples of GESI mainstreaming in other climate change mitigation projects in China

In **Programme 1**, which involved grants for low-carbon actions in China, a **GESI Action Plan** was devised to enhance the mainstreaming of GESI in planning and implementation. The main outcome of the Action Plan was that: "Women are empowered through energy and low-carbon grants. Women's needs are met, there is an increase in women's participation, a proportion of the workers hired for the Programme are women (at least 20-30%), and they are driving transformation through energy and low-carbon grants" (ICF Consulting, 2020b).

The gender-responsive implementation of the programme was pursued through "targeted training and skills development for women and men in selected grantee organisations, gender-sensitive data collection, and reporting on GESI results" (Ibidem). Finally, the main activities included in the GESI Action Plan were:

1) Develop and implement gender and economic action agenda in 2-3 selected grantee organisations;
2) Design activities and deliverables to improve living standards;
3) Engaging national and regional stakeholders to support GESI;
4) Collect disaggregated date to determine impact;
5) Report annually and publicise progress;
6) Create a mechanism at policy level for gender mainstreaming.

In Programme 2, which also included funding grantees in China to implement low-carbon actions, grantees were required to adhere to a **Gender & Inclusion (G&I) Champions ToR**. In this case, **grantees had to commit to appoint one G&I Champion** with the aim to "strengthen internal capability to mainstream gender and inclusion in project activities through the sharing of knowledge, experience, lessons, and tools" (ICF Consulting, 2019). The roles of each G&I Champion included:

1) Acting as focal point for the Project Team regarding all G&I project components and related communication with Programme 2's Gender and Inclusion Technical Director;
2) Being responsible for delivery of G&I activities and outputs (e.g. G&I Assessment, G&I Action Plan, and G&I Quarterly Reporting etc.);
3) Promoting best practice for embedding G&I into project design and implementation for the duration of Programme 2;
4) Ensuring awareness of the Primary Purpose and G&I requirements within the Project Team including among sub-grantee(s), partner(s), and subcontractor(s) (e.g. Team Code of Conduct, G&I Commitments, etc.);
5) Being a sounding board for consultation and feedback within the Project Team regarding G&I questions and concerns;
6) Promoting G&I capacity building and awareness raising for the Project Team through training activities, workshops, and other events as required;
7) Engaging in peer-to-peer learning regarding G&I activities and best practices in association with other Programme 2 grantees (e.g. regular G&I Champions Webinars);
8) Ensuring adherence of the Project Team to the Programme 2 Team Code of Conduct.

Besides the PT, the rest of the stakeholders interviewed did not identify the role of GESI as an important one for this project. They mostly conceive GESI in its narrow connotation as related to gender or ethnical balance. In fact, they often pointed to the fact that gender balance has been generally good, e.g. in JR groups, particularly on the Chinese side. It was also mentioned more than once that GESI should not be a relevant factor in selecting researchers, trainers, or trainees, but selections should rather be based on the experience and applicability of someone's profile. Indeed, there is evidence that gender or ethnical origins were not considered when selecting project stakeholders. Also, ICF pointed out that they have a non-discrimination policy which requires them not to preclude anyone from participating in the project *a priori*. The project training also covered all the Chinese provinces, including regions with a majority of ethnic minorities.

When GESI was understood as being broader than gender balance, it was then quickly dismissed as something for climate change adaptation and resilience, rather than mitigation or the ETS. Interestingly, **some interviewees pointed out how making GESI more prominent in the programme could be counterproductive.** According to them, this would be particularly true for topics about social inclusion, and human and minority rights, which is a sensitive topic in China and might undermine the political dialogue.

Based on all the evidence gathered, it is the view of the evaluators to assess the EU-China ETS project somewhere in between the Level 0 – Non-compliance and Level 1 – Minimum compliance on the GESI mainstreaming scale presented in Figure 7. This is because the connection between the project and the different needs and impacts for women and marginalised groups has only been understood by the PT, and, even so, there are only marginal examples showing how these needs and impacts have been addressed by the project. **It is therefore recommended that, for the continuation of this project and more importantly for Phase II, GESI mainstreaming is made a higher priority.** This would not necessarily mean that the empowerment of women and other vulnerable people should be central to all project activities, but that, as a minimum, GESI considerations are kept in mind, discussed, and implemented whenever it is reasonable to do so. For this purpose, **a GESI mainstreaming strategy** could be part of the requirements of the procurement process for Phase II. **GESI mainstreaming efforts should also be adequately captured by the project logframe indicators** in order to collect evidence of the barriers to and enablers of GESI mainstreaming encountered by the project.

3. Conclusions and Recommendations

3.1. Lessons learnt

Lessons learnt aim at generalising findings and translating past experiences into relevant knowledge that should support decision making, improve performance and promote the achievement of better results. Ideally, they support the work of both the relevant European and partner institutions. Throughout the design and implementation of the EU-China ETS programme from 2017 to 2020 and the No-Cost Extension of the programme in 2021, there are different lessons that can be learned. The most important ones are provided below:

L1: The changes in the EU strategy on China, which now also include aspects of system rivalry and economic competition, did not have any impact on the relevance of the EU-China ETS programme to address the problems and needs of China to implement and further develop the national ETS. In the field of ETS, the EU is strongly promoting an environmental and energy partnership with China and aims at deepening the exchange of ideas in a political dialogue in the field of ETS based on the experiences of the EU ETS being operational since 2005. Nevertheless, reciprocity and a level playing field in financing the programme activities are also playing an important role.

L2: A shift of political responsibility from NDRC to MEE in 2018 resulted in a considerable demand for capacity building. NDRC is China's most important and prestigious government agency. By contrast with the national level, only 2/3 of local government officials from the local DRC dealing with the national ETS followed the shift to the local EPBs, inducing a sudden huge demand for enhancing the capacity of government agencies at local level. The shift of responsibilities had a significant impact on the implementation of the programme in the early stage as the new DG of the Climate Change Department of MEE needed time to consolidate his department and actions taken, also relevant for the EU-China ETS programme. The restructuring of the Chinese government delayed the project for 8-9 months, because of a huge lack of guidance from the competent authorities in China. The change of DG of the CCD also induced a considerable change of the initially agreed training of trainers approach in the project towards direct training.

L3: The roll-out of the national ETS will induce a huge additional demand for well-trained ETS experts from industry to handle the day-to-day business of the domestic emission trading system. This is especially the case as the Chinese ETS is planned to cover more economic sectors and GHGs in the future. This is true for the effectiveness of the current EU-China ETS programme as well as relating to its sustainability in the No-Cost Extension phase until autumn 2021 and Phase II of the programme in 2021-2023. The representatives from Environmental Exchanges suggested a dedicated training just for their stakeholder group and to have knowledge exchange activities with their EU counterparts. At least long-term, the additional demand could be satisfied more efficiently through a ToT approach.

L4: The COVID-19 pandemic had a minor impact on the implementation of the EU-China ETS programme especially for the training activities. As the Chinese government took massive actions to contain the SARSCov2 virus, the interruptions of the activities in China were not as significant as previously assumed. The political dialogue and JR in China were more affected than the training activities in China as for a long time, visits of high-ranking EU representatives and researchers to China were not possible.

L5: The programme benefitted from its flexibility and demand driven approach. The programme was able to quickly react to changes in the framework conditions. A good example was the set-up of the large-scale direct training in 2019 which – different to the

initial train-the-trainers approach – was adopted to satisfy the need for capacity building due to government restructuring and the shift of ETS responsibilities from NDRC to MEE in 2018.

3.2. Conclusions

This chapter contains the conclusions of the evaluation and is structured according to the evaluation criteria. Overall, through the above analyses based on the OECD/DAC and EU evaluation criteria as well as the cross-cutting issues, **the project's final evaluation team can conclude that the EU-China programme is a successful project.** In particular, the following conclusions can be made:

C1: **Relevance:** The EU-China ETS programme is highly relevant for the climate change mitigation policy in China and the EU strategy for China. China is the world's largest emitter of CO_2 and other greenhouse gases. China pledged to stabilise its greenhouse gas emissions before 2030 and achieve carbon neutrality before 2060. To cope with this problem, the Chinese government is heavily dependent on a cost-efficient approach. A domestic ETS and promoting low-carbon economic development can help to achieve this goal. Long-term, the resulting CO_2-price will set appropriate market signals to increase energy efficiency and the shift to low carbon and zero carbon energy sources in China, and hence achieve sustainable development of the country and underline the ability of the Chinese government to take over international responsibility in the field of global climate change mitigation.

C2: **Efficiency:** The EU-China ETS programme has been generally managed in a cost-efficient manner, generating evidence of value for money for the EU, and being delivered in a timely and high-quality fashion. Improvements should be brought nevertheless as regards the reciprocity of costs between the EU and China (linked to R8) and budget management principles / flexibility allowed in the frame of the project itself (linked to R9). There is evidence of a general trend of increasing the efficiency of the project during its implementation through learning by doing. This was the case of reducing the ratio of trainers to trainees as well as, more evidently, in mutually agreeing with the Chinese government a rebalance in the responsibility for covering the costs of training events. Flexibility in the EU financial procedures was cited as a source of project efficiency that allowed the project team to effectively deliver the project in a strongly demand-driven environment. An example of this was the ability to transfer resources within the overall project budget in the occasions of the large-scale training and No-Cost Extension. However, clear provisions about cost attributions between the EU and China based on the principle of financial reciprocity and the identification of the right balance between reducing financial management uncertainty and effective demand-driven implementation are needed before the beginning of the Phase II.

C3: **Effectiveness:** The EU-China ETS programme was effective in delivering its intended outputs, which, in turn, have contributed handsomely to the attaining the sought outcomes. Interviews show evidence that the political dialogue between the EU and China on ETS has been strengthened during the period of the project and the programme can take credit of such result to a large extent. The programme was also very effective in responding to the need of local EPBs and industries of being trained in supporting the operations of the national ETS. The evidence collected shows that the project played an important role in building the capacity of local authorities and private sector on the ETS, particularly in those provinces that did not participate in pilot schemes. Moreover, at the central level, there is evidence that the project team was respected by CCD staff and helped strengthen their capacity on technical matters related to the ETS. Interviews highlighted how the close communication of the project team with the MEE as well as the JR activities contributed to integrate elements from the EU ETS subsequently tailored

to the Chinese context into the design of the Chinese ETS. The evaluation also showed how the programme effectively promoted knowledge exchange both within the programme and with other initiatives.

C4: **Impact:** The EU-China ETS programme has already produced a positive impact on the design and implementation of the ETS in China, particularly through the training of ETS experts, research and policy dialogues, and is expected to generate more impacts for China in the ETS sector. The training of local government industry representatives, scientific research and policy dialogues have provided a good foundation to enhance the human resources in this area and promoted China's move to provide a cost-efficient way to reduce GHG emissions and thus contribute to the fulfilment of China's obligations under the 2015 Paris Agreement of the UNFCCC, i.e. to peak its emissions before 2030 and to fulfil its pledge to reach carbon neutrality by 2060. The EU-China ETS programme is also having a positive impact on maintaining a regular policy dialogue on emission trading between China and the EU, and facilitating joint research of Chinese and European experts on issues related to the roll-out of the Chinese nationwide ETS. Research results have been submitted to MEE and likely enabled the ministry to design and implement the national ETS in a more effective way. The programme also had a positive impact on the capacity of China to operate a nationwide emissions trading system and the familiarity of Chinese industry representatives to handle day-to-day actions of a nationwide emissions trading system. The programme is having a positive impact on the promotion of EU and/or international standards and regulations relating to the climate sector and ETS. All activities under this project were designed to share and promote EU best practices and share the latest version of its regulations, and the EU ETS MRV system refers back to international standards.

C5: **Sustainability:** Strong evidence exists that the outcomes of the Programme will be sustained after the end of its funding period in 2021 and even beyond as (a) the EU-China ETS project team and the EU programme representatives agreed on a No-Cost Extension work plan until June 2021; (b) a second phase of the Platform for Policy Dialogue and Cooperation between the EU and China on Emissions Trading is planned for autumn 2021-2023; (c) there are various ETS issues to be worked on during China's 14th Five-Year Plan (2021-25) and a need for a sustained political dialogue; (d) joint research activities are likely to be sustained in the future, and (e) the technical trainees of the EU-China ETS programme seem to be able to maintain their capacities to operate a nationwide emissions trading system, and capacities of Chinese industry and industry association representatives seem to be sufficiently sustainable to handle day-to-day actions.

C6: **EU Value Added:** The EU-China ETS programme delivered EU Value Added compared to either alternatives funded by single EU Member States or MDBs. The main factors providing added value were: (a) the clear value from learning from first-hand experience in degning and running the EU ETS; (b) the size of the EU being closer to the one of the Chinese market than any single Member States, which added credibility to the project as well as greater potential for comparability with the China; (c) the availability of a larger pool of ETS expertise and financial resources in EU compared to single Member States, which particularly enhanced the technical research and training aspects, but also the ability of the project to cover the entire Chinese territory; (d) the centrality of the EC in the EU climate diplomacy, which made the EU level being the most appropriate and efficient to deliver the project; (e) the high political relevance of this project for both the EU and China in the context of broader international relations, which certainly recognised the centrality of the Chinese ETS in addressing climate change in China and therefore globally.

C7: **Coherence:** The EU-China ETS programme is coherent and complementary with other interventions in China in the ETS area. It is coherent and complementary (a) to the preceding EU-China programme between 2014-2017 to support China in its pilot phase, as the current programme (b) now supports the nationwide implementation of the ETS in its current design and (c) also provides support in terms of scientific works for the future roll-out of the national ETS in China to additional economic sectors and GHGs. It is coherent with the European Green Deal to transform the EU into a modern, resource-efficient and competitive economy with zero net emissions of greenhouse gases by 2050, economic growth is decoupled from resource use, people's health and quality of life is improved leaving no one behind. It is coherent and complementary to the Actions of other EU Member States such as Germany and Norway as well as to programmes from Non-EU donors such as the World Bank and the ADB. The biggest comparative advantages of the EU-China ETS programme compared with other programmes are (a) the size of the programme and (b) the implementation of own activities relating to supporting a Chinese ETS rather than direct financing of government activities in China.

C8: **Cross-cutting issues:** ICF showed to understand the link of the programme to the SDGs and they are referred in the training material. However, GESI – which is related to LNOB and RBA – was not taken into consideration in the EU-China ETS programme design, and it played a very limited role in the project implementation. However, the project team demonstrated a broad understanding of GESI and has actively discussed and considered its mainstreaming in the project. The rest of the stakeholders interviewed did not identify the role of GESI as an important one for this project. When GESI was understood as broader than gender balance, it was quickly dismissed as something for climate change adaptation and resilience, rather than mitigation and the ETS. Interestingly, some interviewees pointed out how making GESI more prominent in the programme could be counterproductive because of political sensitivities around minority and human rights in China. Based on all the evidence gathered, it is the view of the evaluators to assess the EU-China ETS project somewhere in between the Level 0 – Non-compliance and Level 1 – Minimum compliance on the GESI mainstreaming scale presented in Figure 7.

3.3. Key recommendations

The key recommendations are intended to improve the Action in the framework of the cycle under way and to prepare the design of a new programme for the next phase (2021-2023). The Recommendations are clustered, prioritised and carefully targeted to the appropriate audiences at all levels (Project Team, Chinese government on both the central and local level), especially within the Commission structure (EUD, FPI and DG CLIMA).

Since the EU-China ETS programme is continuing its operation in the No-Cost Extension and phase II, the recommendations could also be adopted to improve the current operation of the programme in order to make it more efficient and effective. The recommendations could also be used in designing other EU programmes relating to climate change in China and other countries. As a result, the following recommendations are grouped to targeted specific players/stakeholders for their consideration.

3.3.1. Recommendations for the Project Team

R1: Increase the interaction with the other on-going initiatives (GIZ, Norwegian government, World Bank, ADB etc.). Of course, there are currently interactions with the on-going other activities. However, in order to increase cross-cutting cooperation, more joint activities could be planned and undertaken, not only in teaching, but also with regard to research (Component A) and dissemination of results.

R2: Increase the speed of reporting. In order to increase the efficiency of reporting and to comply with the formal requirements of the ToR, the time between the end of the reporting period and the submission of the reports should be substantially reduced.

R3: Try to integrate some of the lessons about mainstreaming GESI aspects from other projects into the implementation of the programme. Where possible, try to identify "ETS champions" for programme activities showcasing leadership from women and marginalised groups (e.g. people with disabilities), aiming to break stereotypes that scientific and technical sectors are usually male-dominated. Try also to encourage Chinese local authorities in ensuring as much representation of women and marginalised groups among the trainees as well as the trainers.

3.3.2. Recommendations for the EU Commission (EUD, FPI and DG CLIMA)

R4: Intensity the focus the policy dialogue and research in Component A on the requirements of absolute caps in the national ETS to evolve to a cap-and-trade system. Absolute caps of greenhouse gases, especially CO_2, are necessary to fulfil the obligations to achieve a carbon neutral economy in China in 2060 and to reach the target to stabilize the CO_2 emissions before 2030 as quickly as possible.

R5: Agree with the Chinese counterpart that the ToT approach will be implemented in the Phase II of the programme. In the longer-term, the ToT approach will bring about an increase in efficiency and effectiveness of the programme as it will increase the number of stakeholders addressed. This is needed against the background of the roll-out of the ETS to additional sectors and possibly to other GHGs.

R6: Consider to maintain direct training in the short-term only to a certain extent, in parallel with agreeing sufficient reciprocity of financial contribution with the Chinese government (see R8). During the interview with the trainers in Components B and C, they stated that direct training was very successful. Local policy makers are eager to get specific knowledge to manage their practical work on climate change and the ETS. Officials at local level should be the focus, especially in urban areas, not only officials at the provincial level. Also, dedicated training for Environmental Exchanges may be included in the next phase of the programme.

R7: Enlarge the training of Components B and C to cities in line with the ToT approach. Most of the trainers and trainees are city residents, most of the final recipients of the training (industry and local government authorities) as well. In this way, the cost-efficiency of the ToT approach can increase. City level is important, but there is no need to train all 330 cities in China. The evaluators recommend to select 1 or 2 cities per province as pilots, with officials of other cities invited to join. Later, other cities in the same province can also participate or follow-up.

R8: Ensure there is clarity in the definition of the financial responsibilities between the EU and China based on the principle of reciprocity before the beginning of Phase II. This would allow to avoid situations like at the beginning of the current programme in which EU tax payers subsidised the accommodation and subsistence costs of Chinese stakeholders. In Phase II, the EU could expect that the project budget is only used to pay for the experts, while the entire organisational expenses of training costs is covered by China.

R9: Consider adding a cap to the budget allowed to be used under the equivalent of Component D in Phase II. This precaution could reduce the impact on the project budget of potential large-scale demand-driven tasks such as the 2019 large-scale training. Nonetheless, the cap needs to be carefully set in close discussion with DG CLIMA and

in light of the negotiations about financial reciprocity between the EU and China (see R9), so that enough funding is allocated for use in demand-driven activities.

R10: Consider requirement for more coordination with similar EU-programmes on ETS in Asia and other parts of the World in the next phase. In the next phase more cooperation may be planned in order to create a global network regarding emission trading. In the current programme, there was some interaction with the ETS programme in South Korea. This programme, however, had already finished its work. If the Commission is planning to support other countries in Asia to develop or evolve their ETS, cooperation with the Chinese ETS as the World's largest carbon market would be useful. Here, lessons for other countries could be learned.

R11: Provide more coordination of activities by EU and other donors on the promotion of renewable energy in power generation. The actual trading of emission allowances under real market conditions will have an impact on the electricity price and hence the ranking by merit in the supply of the national electricity market. As there are different market drivers on the electricity market, the results from the EU-China ETS programme (such as the 2020 pricing survey) could provide a valuable input for other programmes. For example, joint scientific conferences and workshops could be organised.

R12: Explicitly state the importance of GESI mainstreaming and the level of ambition aimed by the EU in this regard by including specific provisions in the ToR of the Phase II project. The ToR should request for applicants to include their methodology to ensure GESI mainstreaming is planned, pursued, monitored and evaluated appropriately throughout the project.

3.3.3. Recommendations for the Chinese government (both central and local)

R13: Include the discussion on absolute targets and the inclusion of other greenhouse gases of the national ETS in the political dialogue with the Commission. As absolute caps are necessary to reach emission reduction targets leading to a stabilisation of carbon intensity and finally a carbon neutral economy, these issues should play an important role in the next phase of the EU-China ETS programme.

R14: Include the discussion of the implications of the national ETS on competition for different economic sectors in the political dialogue with the Commission. Under market conditions, emission trading is leading to an increase of energy prices for different economic sectors. This is the economic rationale to induce energy intensity improvements and/or the switch to low or zero carbon energy sources in the economy. This development induces an increase of competition within single sectors and has implications for other sectors in the value chain. The next phase of the programme should do more/additional research in this respect.

R15: Include research and discussions on lessons learnt from the EU on the division of GHG mitigation targets and strategies between the EU and Member State level. This would mirror similar issues in China relating to central and provincial levels. The sectoral competition mentioned above may also lead to an increase of cross-provincial competition in China.

R16: Consider a step-by-step approach starting to give more priority to raising awareness at the city level and, in a second step, villages may also be included. At village level, *inter alia*, the following activities could be implemented:

- Awareness raising events such as a village environment day with workshops and educational programmes.

- Development of TV campaigns
- Social media activities such as push-information, blogs etc.

Whether such an approach can be implemented in phase II of this programme is questionable and may be more an internal project to be followed.

R17: Recognise the importance of the community of ETS trainers established by the programme by providing formal "national ETS trainer" certifications. It is imperative for the sustainability of the results of the project and the fulfilment of the Chinese high ambitions on running an effective ETS that the knowledge generated by this programme is retained by national experts and scaled up. Creating an institutionalised community of national ETS trainers would increase the high opportunity costs of these experts in dedicating time to delivering more training.

R18: Acknowledge the need of moving towards a ToT approach in the longer-term in order to reach the required scale by the Chinese ETS size. As the CN ETS is due to involve the entire Chinese territory and more sectors are planned to be included, the direct training formula used in the current programme will quickly prove to be insufficient to train the hundreds of thousands of local officials and industry representatives covered by the national ETS. A ToT approach would appear to be a more efficient and effective way of building capacity nationwide in the longer-term.

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4. Annexes

Annex 1: The Terms of Reference of the evaluation

SPECIFIC TERMS OF REFERENCE

Final Evaluation of the "Support the Platform for Policy Dialogue and Cooperation between EUand China on Emission Trading " project
FWC PSF 2019 - LOT 2: TECHNICAL ASSISTANCE

EuropeAid/139974/DH/SER/multi Request for Services PSF-2019-1254

Contracting Authority: the European Union Delegation to China

1 BACKGROUND

1.1 Relevant country / region / sector background

Over the last three decades, China's economic performance was outstanding in terms of economic growth. The economic evolution, however, did not come without costs: the investment based growth rates of the secondary sector entailed, among other things, heavy environmental pollution and an imbalance with respect to the overall economic development. Against this background, the Chinese government called for “ecological civilisation” and a "new normal" with lower growth rates, a more balanced economic development putting more emphasis on environmental and sustainability issues, the tertiary sector and consumption rather than investment.

In the corollary of its economic growth, China has turned into the world's largest emitter of CO2: its cumulated emissions from fuel combustion exceed the accumulated emissions of the EU and the US and amounted to 11.2 GtCO2 in 2018 (EU 3.37 Gt, US 5.25 Gt).

China, together with the EU, played a crucial role in concluding the Paris agreement. In its NDC (nationally determined contribution), China committed, among other things, to decrease the CO2 intensity of its GDPby 60 to 65% by 2030 compared to 2005. In order to achieve this, China intends to use a number of policy instruments, among which figures a nation-wide emission trading system.

Emission trading has taken a prominent place in the Chinese climate policy portfolio, since it has been first introduced to the Chinese debate in 2011. Since then, several pilot emission trading systems have been launched in provinces and municipalities. These pilot systems were initially meant to gain experience and pave the way for the establishment of a nation-wide emission trading system.

Since the start of the ETS pilots in 2013, preparations for the CN ETS have greatly advanced. The design and structure of the CN ETS is taking shape benefitting considerably from the experience gathered by the pilot systems. They made available a broad range of experience and are thought to influence the final design of the nation-wide system. On the other hand, there is a steep decline in terms of experience and capacity between the regions and municipalities that have operated a pilot emission trading system and those which did not. This means that the grand majority of administrative entities at provincial or municipal level in China have not yet been dealing with an emission trading system.

The central government is undertaking huge efforts to close this capacity gap: according to most recent information, 22000 people from industry and government (central and regional level) have been trained in 220 training courses, mainly organised by the central government. While this figure is impressing, Chinese authorities confirmed that it is not sufficient. Therefore, the main challenge of the Chinese ETS, lack of (human) capacity in operating and running the system at national scale, i.e. in all provinces and municipalities of the People's Republic of China, remains.

1.2 The Action to be evaluated[1]

Title of the Action to be evaluated	• "Platform for Policy Dialogue and Cooperation between EU and China on Emission Trading"
Budget of the Action to be evaluated	• 9,999,907.00 EUR

[1] *The term ‘Action’ is used throughout the report as a synonym of ‘project and programme’.*

CRIS number of the Action to be evaluated	• 2017 / 388-420
Dates of the Action to be evaluated	• Start: 09/10/2017 • End: 30/06/2021

1.3 Stakeholders of the Action

- The European Commission represented by DG CLIMA and FPI
- The Administration of China - Ministry of Ecology and Environment (MEE)
- The Contractor: lead ensured by ICF CONSULTING LTD, with partners Sinocarbon, SQ Consult B.V., MWH, Ecofys Netherlands V.B.
- Other stakeholders that might benefit from the project actions: Provincial and municipal Environment agencies, private sector companies in the sectors of power generation and management, aviation, industrial sectors to be included in the CN ETS in the years to come etc…, research institutes from the EU and China involved in research activities, EU Member States organisations

1.4 Other available information

Please refer to the contract proposal, event and interim reports available.

2 DESCRIPTION OF THE EVALUATION ASSIGNMENT

Type of evaluation	**final**
Coverage	the Action in its/their entirety
Geographic scope	China
Period to be evaluated	From 09/10/2017 to end November 2020

2.1 Objectives of the evaluation

Systematic and timely evaluation of its programmes and activities is an established priority[2] of the European Commission[3]. The focus of evaluations is on the assessment of achievements, the **quality** and the

[2] *COM(2013) 686 final "Strengthening the foundations of Smart Regulation – improving evaluation" - http://ec.europa.eu/smart-regulation/docs/com_2013_686_en.pdf; EU Financial regulation (art 27); Regulation (EC) No 1905/200; Regulation (EC) No 1889/2006; Regulation (EC) No 1638/2006; Regulation (EC) No 1717/2006; Council Regulation (EC) No 215/2008*

[3] *SEC (2007)213 "Responding to Strategic Needs: Reinforcing the use of evaluation", http://ec.europa.eu/smart-regulation/evaluation/docs/eval_comm_sec_2007_213_en.pdf ; SWD (2015)111 "Better Regulation Guidelines", http://ec.europa.eu/smart-regulation/guidelines/docs/swd_br_guidelines_en.pdf ; COM(2017) 651 final 'Completing the Better Regulation Agenda: Better solutions for better results', https://ec.europa.eu/info/sites/info/files/completing-the-better-regulation-agenda-better-solutions-for-better-results_en.pdf*

results[4] of Actions in the context of an evolving cooperation policy with an increasing emphasis on **result-oriented approaches and the contribution towards EU foreign policy objectives and the implementationof the SDGs.**[5]

From this perspective, evaluations should **look for evidence of why, whether or how these results are linked to the EU intervention** and seek **to identify the factors driving or hindering progress**.

Evaluations should provide an understanding of the **cause and effect links** between: inputs and activities, and outputs, outcomes and impacts. Evaluations should serve accountability, decision making, learning and management purposes.

The main objectives of this evaluation are to provide the relevant services of the European Union, the interested stakeholders with:

- an overall independent assessment of the past performance of the " Platform for Policy Dialogue and Cooperation between EU and China on Emission Trading" project, paying particular attention to its results measured against its expected objectives; and the reasons underpinning such results;
- key lessons learned, conclusions and related recommendations in order to improve current and future Actions.

In particular, this evaluation will serve the Contracting Authority (European Commission).

This evaluation is needed in order to understand the performance of the Action, its enabling factors and those hampering a proper delivery of results as to inform the planning of the future EU interventions and Actions in the environment sector.

The main user of this evaluation will be the Contracting Authority.

2.2 Requested services

2.2.1 Scope of the evaluation

The evaluation will assess the Action using the five standard DAC evaluation criteria, namely: relevance, effectiveness, efficiency, sustainability and impact. In addition, the evaluation will assess two EU specific evaluation criteria:

- the EU added value (the extent to which the Action brings additional benefits to what would have resulted from Member States' interventions only);
- the coherence of the Action itself, with the EU strategy in China for the climate sector and with other EU policies and Member State Actions.

[4] *Reference is made to the entire results chain, covering outputs, outcomes and impacts. Cfr. Regulation (EU) No 236/2014 "Laying down common rules and procedures for the implementation of the Union's instruments for financing external action" - https://ec.europa.eu/neighbourhood-enlargement/sites/near/files/pdf/financial_assistance/ipa/2014/236-2014_cir.pdf.*

[5] *The New European Consensus on Development 'Our World, Our Dignity, Our Future', Official Journal 30th of June 2017. http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:C:2017:210:TOC*

The evaluation team shall furthermore consider whether gender[6], environment and climate change were mainstreamed; the relevant SDGs and their interlinkages were identified; the principle of Leave No-One Behind and the rights-based approach methodology was followed in the identification/formulation documents and the extent to which they have been reflected in the implementation of the Action, its governance and monitoring.

2.2.2 Indicative Evaluation Questions

The specific Evaluation Questions as formulated below are indicative. Based on the latter and following initial consultations and document analysis, the evaluation team will discuss them with the Evaluation Manager[7] and propose in their Inception Report a complete and finalised set of Evaluation Questions with indication of specific Judgement Criteria and Indicators, as well as the relevant data collection sources and tools.

Once agreed through the approval of the Inception Report, the Evaluation Questions will become contractually binding.

1. Relevance:

- To what extent are the programme priorities in line with the sectoral policies and the programming/ strategy documents adopted in the EU and China in the climate sector and in particular on Emissions trading?
- To what extent and how the project responds to each of the different priorities for the programme: (i) a support to the implementation of an effective emissions trading system in China by increasing effective emission trading capacities of the Chinese authorities and the industries involved in the implementation of emission trading, (ii) the promotion of Emissions Trading System as a policy and regulatory tool to combat climate change, (iii) a support to the EU-China political dialogue on the development of emission trading, (iv) the promotion of increased levels of information, expertise, and research exchanges between the EU and China on ETS.
- Are the activities and outputs of the programme consistent with respectively the overall and specific objectives of the programme?
- To what extent is there coherence and complementarity with the MoU on ETS signed between the EU and China? Other relevant policies of importance to be considered?

2. Effectiveness:

- To what extent the programme has progressed towards the completion of its expected outcomes and impacts, especially considering (i) the strengthening of emission trading capacities from the side of the Chinese authorities and the industries involved, (ii) the promotion of Emissions Trading System as a policy and regulatory tool to combat climate change, (iii) the promotion of the EU-China political dialogue on the development of emission trading, (iv) the promotion of increased levels of information, expertise, and research exchanges between the EU and China on ETS.
- To what extent outputs and –consequently- objectives are likely/ have been so far achieved?

[6] Please see for guidance on how to integrate gender aspects into evaluations https://ec.europa.eu/europeaid/guidance-evaluation-gender-cross-cutting-dimension_en

[7] The Evaluation Manager is the staff of the Contracting Authority managing the evaluation contract. In most cases this personwill be the Operational manager of the Action(s) under evaluation.

- What are the major factors that had an influence on the achievement of the intended outputs and objectives of the programme?

3. Efficiency:

- Is the implementation of the programme activities cost efficient? Are the modalities in place for programme management and implementation efficient, especially considering the Contractor set up, the location of the programme team, as well as the sub-contractors involved?
- Are the arrangements in terms of monitoring of the activities implemented and of the programme overall satisfactory?
- Was the pace of implementation of the programme satisfactory according to the budget, timeframe and circumstances prevailing?

4. Sustainability:

- What are the major factors influencing the potential sustainability of the programme?
- How these factors can inform on the sustainability of the action, especially considering the EU-China political dialogue on ETS?

5. Impact:

- Is the impact of the project satisfactory, especially considering the EU- China political dialogue?
- Were new institutional/ governance or management practices on ETS applied on the side of China during the time of the project? Did the project has a direct influence on those?
- Has the programme been able to promote EU and/or international standards and regulations relating to the climate sector and ETS?

6. EU added value:

- What additional benefits have been brought by the specific features of this programme as opposed to a project implementation that would have been carried out by EU Member States organisations directly? What added value this programme has shown considering its main objectives?

7. Coherence:

- What is the coherence of this action with the EU Green Deal, the EU strategy in China and the EU sectoral approach in ETS/ the climate sector?
- What coherence exists with other Member State actions in China?
- In case any, what coherence/coordination should be sought with other international donors bearing in mind existing constraints (procurement rules etc)?

2.3 Phases of the evaluation and required outputs

The evaluation process will be carried out in five phases:

- Inception
- Desk
- Interview

- Synthesis
- Dissemination

The outputs of each phase are to be submitted at the end of the corresponding phases as specified in the synoptic table in section 2.3.1.

2.3.1 Synoptic table

The following table presents an overview of the key activities to be conducted within each phase and liststhe outputs to be produced by the team as well as the key meetings with the Contracting Authority and the Reference Group. The main content of each output is described in Chapter 5.

Phases of the evaluation	Key activities	Outputs and *meetings*
InceptionPhase	• Initial document/data collection • Background analysis • Inception interviews • Stakeholder analysis • Reconstruction (or as necessary, construction) of the Intervention Logic, and / or description of the Theory of Change (based upon available documentation and interviews) • Methodological design of the evaluation (Evaluation Questions with judgement criteria, indicators and methods of data collection and analysis) and evaluation matrix	• *Kick-off meeting with the Contracting Authority and the Reference Group* (remote conference possible) • Draft Inception report • Final Inception report • Slide presentation of the Inception Report
Desk Phase	• In-depth document analysis (focused on the Evaluation Questions) • Interviews • Identification of information gaps and of hypotheses to be tested in the interview phase • Methodological design of the Interview Phase	• Desk Note • Slide presentation of key findings of the desk phase • *Meeting with Reference Group* (remote conference possible)
InterviewPhase	• Gathering of primary evidence with the use of interviews. • Data collection and analysis	• *Initial meetings at country level with* In Europe: EU officials from DG CLIMA In China : the project team led byICF, the EU Delegation, and stakeholders from the MEE plus others if relevant • Intermediary Note • Slide Presentation of key findings of the interview phase • *Debriefing with the Reference Group*/ EUD via remote conference

Phases of the evaluation	Key activities	Outputs and *meetings*
Synthesisphase	• Final analysis of findings (with focus on the Evaluation Questions) • Formulation of the overall assessment, conclusions and recommendations • Reporting	• Draft Final Report • Executive Summary according to the standard template published in the EVAL module • Final Report • Slide presentation • *Meeting with Reference Group/* remote conference possible
Dissemination phase	• Organisation of the final presentation	• *Final presentation seminar* /remote conference possible

2.3.2 Inception Phase

This phase aims at structuring the evaluation and clarifying the key issues to be addressed.

The phase will start with a kick-off session with both DG CLIMA in Brussels and the EU Delegation in Beijing involving DG CLIMA and FPI, and the evaluators (remote conference). Half-day presence of evaluators is required. The meeting aims at arriving at a clear and shared understanding of the scope of the evaluation,its limitations and feasibility. It also serves to clarify expectations regarding evaluation outputs, the methodology to be used and, where necessary, to pass on additional or latest relevant information.

In the Inception phase, the relevant documents will be reviewed (see annex II).

Further to a first desk review of the political, institutional and/or technical/cooperation framework of EU support to the climate/ ETS sector in China and in the EU, the evaluation team, in consultation with the Evaluation Manager, will reconstruct or as necessary construct, the Intervention Logic of the Action to be evaluated.

Furthermore, based on the Intervention Logic, the evaluators will develop a narrative explanation of the logic of the Action that describes how change is expected to happen within the Action, all along its results chain, i.e. Theory of Change. This explanation includes an assessment of the evidence underpinning this logic (especially between outputs and outcomes, and between outcomes and impact), and articulates the assumptions that must hold for the Action to work, as well as identification of the factors most likely to inhibit the change from happening.

Based on the Intervention Logic and the Theory of Change the evaluators will finalise i) the Evaluation Questions with the definition of judgement criteria and indicators, the selection of data collection tools and sources, ii) the evaluation methodology, and iii) the planning of the following phases.

The methodological approach will be represented in an Evaluation Design Matrix[8], which will be includedin the Inception Report. The **methodology of the evaluation should be gender sensitive**, **contemplate theuse of sex- and age-disaggregated data and demonstrate how actions have contributed to progress ongender equality**.

The limitations faced or to be faced during the evaluation exercise will be discussed and mitigation measures described in the Inception Report. Finally, the work plan for the overall evaluation process will

[8] *The Evaluation Matrix is a tool to structure the evaluation analysis (by defining judgement criteria and indicators for each evaluation question). It helps also to consider the most appropriate and feasible data collection method for each of the questions,*

be presented and agreed in this phase; this work plan shall be in line with that proposed in the present ToR. Any modifications shall be justified and agreed with the Evaluation Manager.

On the basis of the information collected, the evaluation team should prepare an **Inception Report**; its content is described in Chapter 5.

The evaluation team will then, if needed, present the **Inception Report** to the Reference Group. This canbe done via video conference.

2.3.3 Desk Phase

This phase is when the document analysis takes place. The analysis should include a brief synthesis of the existing literature relevant to the Action.

The analysis of the relevant documents shall be systematic and reflect the methodology developed and approved during the Inception Phase.

Selected phone interviews with the project management, the relevant EU services in Brussels and Beijing and key stakeholders in Beijing and/or in the EU may be conducted during this phase to support the analysis of secondary sources.

The activities to be conducted during this phase should allow for the provision of preliminary responses to each evaluation question, stating the information already gathered and its limitations. They will also identify the issues still to be covered and the preliminary hypotheses to be tested.

During this phase the evaluation team shall fine-tune the evaluation tools to be used during the Interview Phase and describe the preparatory steps already taken and those to be taken for its organisation, including the list of people to be interviewed, dates and itinerary of visits, and attribution of tasks within the team.

At the end of the desk phase a **Desk Note** will be prepared.

A presentation by the evaluation team to the Reference Group will take place via video conference/ conference call.

2.3.4 Interview Phase

The Interview Phase starts after approval of the Desk Note by the Evaluation Manager.

The Interview Phase aims at validating / changing the preliminary answers formulated during the Desk phase and further completing information through primary research.

If any significant deviation from the agreed work plan or schedule is perceived as creating a risk for the quality of the evaluation or not respecting the end of the validity of the specific contract, these elementsare to be immediately discussed with the Evaluation Manager and, regarding the validity of the contract, corrective measures undertaken.

In the first days of the interview phase, the evaluation team shall hold a briefing meeting with the project management and DG CLIMA (through VC means considering the Covid crisis).

During the interview phase, the evaluation team shall ensure adequate contact and consultation with, and involvement of the different stakeholders; with the relevant government authorities and agencies. Throughout the mission the evaluation team will use the most reliable and appropriate sources of information, respect the rights of individuals to provide information in confidence, and be sensitive to the beliefs and customs of local social and cultural environments.

At the end of the interview phase, the evaluation team will summarise its work, analyse the reliability and coverage of data collection, and present preliminary findings in a meeting with the project management,FPI and DG CLIMA.

At the end of the interview Phase an **Intermediary Note** will be prepared.

2.3.5 Synthesis Phase

This phase is devoted to the preparation by the contractor of **two distinct documents**: the **Executive Summary** and the **Final Report**, whose structures are described in the Annex III; it entails the analysis of the data collected during the desk and interview phases to answer the Evaluation Questions and preparation of the overall assessment, conclusions and recommendations of the evaluation.

The evaluation team will present, in a single Report with Annexes, their findings, conclusions and recommendations in accordance with the structure in Annex III; a separate Executive Summary will be produced as well, following the compulsory format given in the EVAL module (see Annex III).

The evaluation team will make sure that:

- Their assessments are objective and balanced, statements are accurate and evidence-based, and recommendations realistic and clearly targeted.
- When drafting the report, they will acknowledge clearly where changes in the desired direction are known to be already taking place.
- The wording, inclusive of the abbreviations used, takes into account the audience as identified in art. 2.1 above.

The evaluation team will deliver and then present via video conference the **Draft Final Report** to the Reference Group to discuss the draft findings, conclusions and recommendations. Presence of both experts from the evaluation team is required.

The Evaluation Manager consolidates the comments expressed by the Reference Group members and sends them to the evaluation team for the report revision, together with a first version of the Quality Assessment Grid (QAG) assessing the quality of the Draft Final Report. The content of the QAG will be discussed with the evaluation team to verify if further improvements are required, and the evaluation team will be invited to comment on the conclusions formulated in the QAG (through the EVAL Module).

The evaluation team will then finalise the **Final Report** and the **Executive Summary** by addressing the relevant comments. While potential quality issues, factual errors or methodological problems should be corrected, comments linked to diverging judgements may be either accepted or rejected. In the latter instance, the evaluation team must explain the reasons in writing. After approval of the final report, the QAG will be updated and sent to the evaluators via EVAL Module.

- **2.3.1 Dissemination phase**

The dissemination phase will consist in the presentation of the final report and its most important elements (findings, recommendations etc…) to the reference group for the evaluation. This final presentation will be done by remote conference call in view of the current circumstances and the COVID related crisis.

2.4 Specific Contract Organisation and Methodology (Technical offer)

The invited Framework Contractors will submit their specific Contract Organisation and Methodology by using the standard PSF 2019 template B-VII-III and its annexes B-VII-IVa and B-VII-B-II-V.

The evaluation methodology proposed to undertake the assignment will be described in the Chapter 3 (Strategy and timetable of work) of the template B-VII-III. Contractors will describe how their proposed methodology will address the cross-cutting issues mentioned in these Terms of Reference and notably gender equality and the empowerment of women. This will include (if applicable) the communication action messages, materials and management structures.

The technical offer should not exceed 10 pages, excluding relevant annexes, timetable and CVs (the maximum length of CVs is 4 pages). Any pages exceeding these/this limit will not be taken into consideration.

2.5 Management and Steering of the evaluation

2.5.1 At the EU level

The evaluation is managed by the FPI team of the Evaluation manager of the EU Delegation to China; the progress of the evaluation will be followed closely with the assistance of a Reference Group consisting of members of EU Services from DG CLIMA and FPI.

The main functions of the Reference Group are:

- To define and validate the Evaluation Questions.
- To facilitate contacts between the evaluation team and the EU services and external stakeholders.
- To ensure that the evaluation team has access to and has consulted all relevant information sources and documents related to the Action.
- To discuss and comment on notes and reports delivered by the evaluation team. Comments by individual group members are compiled into a single document by the Evaluation Manager and subsequently transmitted to the evaluation team.
- To assist in feedback on the findings, conclusions, lessons and recommendations from the evaluation.
- To support the development of a proper follow-up action plan after completion of the evaluation.

2.5.2 At the Contractor level

Further to the Requirements set in the art. 6 of the Global Terms of Reference and in the Global Organisation and Methodology, respectively annexes II and III of the Framework contract PSF 2019, the contractor is responsible for the quality of: the process; the evaluation design; the inputs and the outputsof the evaluation. In particular, it will:

- Support the Team Leader in its role, mainly from a team management perspective. In this regard, the contractor should make sure that, for each evaluation phase, specific tasks and outputs for each team member are clearly defined and understood.
- Provide backstopping and quality control of the evaluation team's work throughout the assignment.
- Ensure that the evaluators are adequately resourced to perform all required tasks within the time framework of the contract.

2.6 Language of the Specific contract

The language of the specific contract is to be English.

3 EXPERTISE REQUIRED

3.1 Number of experts and of working days per category

The table below indicates the minimum number of evaluators and the minimum number of working days (overall and during the interview phase), per category of experts to be foreseen by the Contractor.

Category of experts	Minimum number of evaluators	Total minimum number of working days (total)	(Out of which) minimum number of working days on mission
Cat I	1	50	0
Cat II	1	50	0

In particular, the Team Leader (to be identified in the Organisation and Methodology and in the Financial Offer) is expected to be a Cat I expert, possess a demonstrable senior evaluation expertise coherent with the requirements of this assignment and does not provide less than 50 working days. Considering that dueto the Covid-19 crisis travels to China are not easily feasible, the field work/ interview phase for China and Europe will take place remotely.

3.2 Expertise required

Minimum requirements of the team (Cat I expert)

Qualifications and skills

- University degree at least at Master's degree level in a discipline relevant to the scope of the assignment (such as environmental management, environmental or energy economics)
- In the absence of a Master's degree, equivalent relevant professional experience of at least 3 years in addition to the 10 years general professional experience in the climate/ environment/ energy sectors

- **General professional experience**
  - Minimum 10 years of postgraduate experience in the climate/ environment/ energy sectors dealing with related policy issues
- **Specific professional experience**
  - Minimum 10 different assignments in the evaluation and/or monitoring of EU and/or other donors' funded programmes in the climate/ environment/ energy sectors
- **Additional requirements of the team (Cat I expert):**
  - Minimum of 3 assignments as Team leader for project evaluation during the last 5 years
  - Knowledge of the EU cooperation with China in the fields of climate and energy cooperation is an asset
  - Working experience/ prior evaluation work on ETS systems, and their respective design and implementation is an asset
  - Excellent oral and written communication and presentation skills required for communicating with a wide range of stakeholders
  - Strong computer literacy skills

- **Minimum requirements of the team (Cat II expert):**

Qualifications and skills

- University degree at Master's level in a discipline relevant to the scope of the assignment such as environmental management, environmental or energy economics

- In the absence of a Master's degree, equivalent relevant professional experience of at least 3 years in addition to the 5 years of general professional experience in the climate/ environment/ energy sectors

- **General professional experience**
  - Minimum 5 years of postgraduate experience in the climate/ environment/ energy sectors dealing with related policy issues
- **Specific professional experience**
  - Minimum 5 different assignments in the evaluation and/ or monitoring of EU and/or other donors' funded programmes in the climate/ environment/ energy sectors
- **Additional requirements of the team (Cat I expert):**
  - Experience working in China on climate related issues is considered an asset
  - Knowledge of the EU cooperation with China in the fields of climate/ energy cooperation is an asset
  - Working experience/ prior evaluation work on ETS systems, and their respective design and implementation is an asset
  - Excellent oral and written communication and presentation skills required for communicating with a wide range of stakeholders
  - Strong computer literacy skills

- **Language skills of the team:**
  - Cat I expert: shall possess a level C2 expertise in English;
  - Cat II expert: shall possess a level C2 expertise in English;

Languages levels are defined for understanding, speaking and writing skills by the Common European Framework of Reference for Languages available at https://europass.cedefop.europa.eu/en/resources/european-language-levels-cefr and shall be demonstrated by certificates or by past relevant experience.

The European Union pursues an equal opportunities policy. Gender balance in the proposed team, at all levels, is highly recommended.

3.3 Presence of management team for briefing and/or debriefing

The presence of member(s) of the management team is not required for briefing or debriefing purposes.

4 LOCATION AND DURATION

4.1 Starting period

Provisional start of the assignment is mid December 2020.

4.2 Foreseen duration of the assignment in calendar days

Maximum duration of the assignment: 150 calendar days.

This overall duration includes working days, week-ends, periods foreseen for comments, for review of draft versions, debriefing sessions, and distribution of outputs.

4.3 Planning, including the period for notification for placement of the staff[9]

As part of the technical offer, the framework contractor must fill in the timetable in the Annex IV (to be finalised in the Inception Report). The 'Indicative dates' are not to be formulated as fixed dates but ratheras days (or weeks, or months) from the beginning of the assignment (to be referenced as '0').

Sufficient forward planning is to be taken into account in order to ensure the active participation and consultation with government representatives, national / local or other stakeholders.

4.4 Location(s) of assignment

The assignment will take place remotely, since current conditions due to the COVID 19 crisis are not conducive for the organisation of field visits in China. Phone call and/or interviews will replace field visitsin Europe and China.

5 REPORTING

5.1 Content, timing and submission

The outputs must match quality standards. The text of the reports should be illustrated, as appropriate, with maps, graphs and tables; a map of the area(s) of Action is required (to be attached as Annex).

List of outputs:

	Number of Pages *(excluding annexes)*	**Main Content**	**Timing for submission**
Minutes of Reference Group (RG) meetings	2 pages	• Discussions and main points of focus with the Reference Groups • Conclusions and actions to be taken	Any time a RG meeting is taking place
Inception Report	10 pages	• Intervention logic • Stakeholder map • Methodology for the evaluation, incl.: ○ Evaluation Matrix: Evaluation Questions, with judgement criteria and indicators, and data analysis and collection methods ○ Consultation strategy ○ Interview approach • Analysis of risks related to the evaluation methodology and mitigation measures • Work plan	End of InceptionPhase
Desk Report	15 pages	• Preliminary answers to each Evaluation Question, with indication of the limitations of the available Information	End of the Desk Phase

[9] *As per art 16.4 a) of the General Conditions of the Framework Contract SIEA*

	Number of Pages *(excluding annexes)*	Main Content	Timing for submission
		• Data gaps to be addressed, issues still to be covered and hypotheses to be tested during the interview phase • Update of the interview phase approach • Update of the work plan of the following phases	
Intermediary Report	15 pages	• Activities conducted during the interview phase • Difficulties encountered during the interview phase and mitigation measures adopted • Key preliminary findings (combining desk and interview phase ones)	End of the interview phase
Draft Final Report	60 pages	• **Cf. detailed structure in Annex III**	End of SynthesisPhase
Draft Executive Summary – by using the EVAL online template	N/A	• **Cf. detailed structure in Annex III**	End of SynthesisPhase
Final report	60 pages	• Same specifications as of the Draft Final Report, incorporating any comments received from the concerned parties on the draft report that have been accepted	2 weeks after having received comments to the Draft Final Report.
Executive Summary – by using the EVAL online template	N/A	• Same specifications as for the Draft Executive Summary, incorporating any comments received from the concerned parties on the draft report that have been accepted	Together with the final version of the Final Report

5.2 Use of the EVAL module by the evaluators

It is strongly recommended that the **submission of deliverables** by the selected contractor **be performed through their uploading in the EVAL Module**, an evaluation process management tool and repository of the European Commission. The selected contractor will receive access to online and offline guidance in order to operate with the module during the related Specific contract validity.

5.3 Comments on the outputs

For each report, the Evaluation Manager will send to the Contractor consolidated comments received from the Reference Group or the approval of the report within 15 calendar days. The revised reports addressing the comments shall be submitted within 10 calendar days from the date of receipt of the comments. The evaluation team should provide a separate document explaining how and where comments have been integrated or the reason for not integrating certain comments, if this is the case.

5.4 Assessment of the quality of the Final Report and of the Executive Summary

The quality of the draft versions of the Final Report and of the Executive Summary will be assessed by the Evaluation Manager using the online Quality Assessment Grid (QAG) in the EVAL Module (text provided in Annex V). The Contractor is given – through the EVAL module - the possibility to comment on the assessments formulated by the Evaluation Manager. The QAG will then be reviewed following the submission of the final version of the Final Report and of the Executive Summary.

The compilation of the QAG will support/inform the compilation by the Evaluation Manager of the FWC SIEA's Specific Contract Performance Evaluation.

5.5 Language

All reports shall be submitted in English.

5.6 Number of report copies

Apart from their submission -preferably via the EVAL Module-, the approved version of the Final Report will be also provided in electronic version at no extra cost.

5.7 Formatting of reports

All reports will be produced using Font Arial or Times New Roman minimum letter size 11 and 12 respectively, single spacing, double sided. They will be sent in Word and PDF formats.

Annex 4: Evaluation Matrix

EQ1 – Problems and needs (Relevance):

Question	Judgement criteria	Indicators	Source of information	Collection methods
1. To what extent the EU-China ETS programme (hereafter "the programme") addresses identified problems and needs?				
1.1 To what extent are the programme priorities in line with the sectoral policies and the programming / strategy documents adopted in the EU and China in the climate sector and in particular on emissions trading?	The programme is in line and directly reinforces EU and China's policies in the climate sector and emissions trading	Qualitative feedback from involved stakeholders on the alignment with key areas	• Project Team • EU and Chinese Institutions • Third parties (other development partners)	• Document review • Kick-off workshop • Survey • KIIs
1.2 To what extent is there coherence and complementarity with the MoU on ETS signed between the EU and China?	The programme respects the objectives, roles and responsibilities included in MoU	Qualitative feedback from involved stakeholders on the alignment with the MoU	• Project Team • EU and Chinese Institutions	• Document review • Kick-off workshop • KIIs
1.3 Are the activities and outputs of the programme consistent with respectively the overall and specific objectives of the programme?	The programme's activities and outputs are consistent with the programme's objectives	• Qualitative feedback from involved stakeholders on the consistency • Logframe output indicators	• Project Team • EU and Chinese Institutions • ETTs • Trainees • Researchers	• Document review • Kick-off workshop • KIIs • Monitoring data
1.4 Were the key stakeholders and target groups selected for institutional capacity building relevant to address the programme's priorities?	Stakeholders and target groups are the right ones to address the programme's priorities	Qualitative feedback from involved stakeholders about the appropriateness of the stakeholder selected	• Project Team • EU and Chinese Institutions • ETTs • Trainees • Researchers	• Document review • Kick-off workshop • Survey • KIIs
1.5 To what extent did external factors or context changes during the programme implementation (a) positively or (b) negatively impact the relevance of the programme for its key stakeholders and target groups?	• The programme's goals and specific objectives and needs are still valid. • Several assumptions and causal pathways outlined in the Theory of Change remain valid, after adaptations and refinements.	Qualitative feedback from involved stakeholders on the impact of external factors	• Project Team • EU and Chinese Institutions • ETTs • Trainees • Researchers	• Document review • Kick-off workshop • KIIs

EQ2 – Sound management and value for money (Efficiency):

Question	Judgement criteria	Indicators	Source of information	Collection methods
2. To what extent is the relationship between programme inputs and outputs timely, cost-efficient, and to expected quality standards?				
2.1 Is the implementation of the programme activities cost efficient? Are the modalities in place for programme management and implementation efficient, especially considering the Contractor set up, the location of the programme team, as well as the sub-contractors involved?	The project management arrangements put in place by the programme are efficient.	• Qualitative feedback from involved stakeholders on efficiency of project management • Logframe output indicators	• Project Team • EU and Chinese Institutions • ETTs • Researchers	• Document review • Kick-off workshop • Survey • KIIs • Monitoring data • Financial expenditures data
2.2 Are the arrangements in terms of monitoring of the activities implemented and of the project overall satisfactory (i.e. useful and practical)?	A functional M&E framework has been appropriately designed, set up and functioning	• Qualitative feedback from involved stakeholders on efficiency of the M&E framework • Appropriateness and completeness of the logframe indicators	• Project Team • EU and Chinese Institutions	• Document review • Kick-off workshop • KIIs • Monitoring data
2.3 Was the pace of implementation of the project satisfactory according to the budget, timeframe and circumstances prevailing?	The project was delivered on time and on budget and, any potential divergences from the plan have been acted upon successfully.	• Qualitative feedback from involved stakeholders on delays • Timeliness of the delivery of outputs and outcomes (incl. budget spending) • Pace of the financial expenditures • Effectiveness of the measures adopted to reduce the delays	• Project Team • EU and Chinese Institutions • ETTs • Researchers	• Document review • Kick-off workshop • Survey • KIIs • Monitoring data • Financial expenditures data
2.4 Considering the inputs used, were the outputs delivered by the programme of the appropriate quality standards?	The programme's outputs are of high quality, according to the project beneficiaries	• Qualitative feedback from involved stakeholders on the level of	• EU and Chinese Institutions • ETTs	• Document review • Survey • KIIs

Question	Judgement criteria	Indicators	Source of information	Collection methods
		satisfaction with the quality of outputs	• Trainees • Researchers • Third parties (other development partners)	
2.5 To what extent was the programme efficient in increasing dissemination, replication potential and knowledge transfer?	The programme has been successful in disseminating key results and lessons, and in pursuing their scale-up and replication.	• Qualitative feedback from involved stakeholders on efficiency of dissemination • Logframe output and outcome indicators about training and awareness raising	• Project Team • EU and Chinese Institutions • ETTs • Trainees • Researchers • Third parties (other development partners)	• Document review • Kick-off workshop • KIIs • Monitoring data

EQ3 – Achievement of purpose (Effectiveness):

Question	Judgement criteria	Indicators	Source of information	Collection methods
3. To what extent has the programme delivered intended outputs and achieved outcomes (both intended and unintended)?				
3.1 To what extent has the programme achieved delivery of its intended outputs? • Output 1: Appropriate visibility of the ETS project • Output 2: Steering provided to the ETS project and identification of topics of mutual interest • Output 3: Web-based platform for Chinese ETS experts established • Output 4: Enhanced knowledge & engagement on ETS of experts following their participation in annual ETS expert workshops • Output 5: Joint research paper of Chinese and European experts created	The programme has achieved or exceeded its targets in terms outputs.	• Qualitative feedback from involved stakeholders on the output delivered • Logframe output indicators	• Project Team • EU and Chinese Institutions • ETTs • Trainees • Researchers	• Document review • KIIs • Monitoring data

Question	Judgement criteria	Indicators	Source of information	Collection methods
• Output 6: On-the-job experience gained is transferable to the administration at both central and local level • Output 7: Better understanding of ETS regulation and compliance • Output 8: Enhanced knowledge of the industry on operational tasks related to ETS • Output 9: Online training software delivered for industrial enterprises				
3.2 What were the main factors influencing the delivery or not of planned outputs?	N/A – there is no judgement involved here. The EQ is merely exploratory.	• Qualitative feedback from involved stakeholders on key factors	• Project Team • EU and Chinese Institutions • ETTs • Trainees • Researchers	• Document review • Kick-off workshop • KIIs
3.3 To what extent has the programme achieved its intended outcomes? 1. The political dialogue between China and the EU on the development of ETS is strengthened and research exchanges between the EU and China on ETS are promoted. 2. Capacities on emission trading on the side of the Chinese government authorities and the industries involved are significantly strengthened. 3. The familiarity of Chinese industry representatives to handle day-to-day actions required under an emission trading system is sufficiently enhanced	There is evidence of the contribution of the programme to the achievement of its intended outcomes.	• Qualitative feedback from involved stakeholders on achievements • Logframe outcome indicators	• Project Team • EU and Chinese Institutions • ETTs • Trainees • Researchers • Third parties (other development partners)	• Document review • Kick-off workshop • Survey • KIIs • Monitoring data
3.4 What were the main constraints and opportunities	The programme was a key contributor to	Qualitative feedback from	• Project Team	• Document review

Question	Judgement criteria	Indicators	Source of information	Collection methods
that influenced the degree of achievement of the programme outcomes?	the achievement of intended outcomes.	involved stakeholders on constraints and opportunities	• EU and Chinese Institutions • ETTs • Trainees • Researchers	• Kick-off workshop • KIIs
3.5 Were there additional outputs and/or unintended outcomes obtained by the programme that were not planned in the project design?	The programme management has been appropriately designed to identify, address / capitalise from, and learn from unintended outcomes	Qualitative feedback from involved stakeholders on additional / unintended results	• Project Team • EU and Chinese Institutions • ETTs • Trainees • Researchers	• Document review • Kick-off workshop • KIIs
3.6 Were there geographic differences in the effectiveness of the project to build ETS capacity? If so, what were the key enablers and barriers that determined such differences?	The programme has been able to strengthen the capacity of ETS stakeholders throughout China and to address local differences in capacity needs.	Qualitative feedback from involved stakeholders on geographic inconsistencies	• Project Team • ETTs • Trainees • Researchers	• Document review • Kick-off workshop • Survey • KIIs
3.7 Have the behavioural patterns changed in the beneficiary organisations and groups at various levels, and how far have the changed institutional arrangements and characteristics resulted in the planned improvements?	The programme has clearly contributed to the adoption and implementation of new knowledge by its key target groups	• Qualitative feedback from involved stakeholders on behavioural change • Logframe outcome indicators	• Project Team • EU and Chinese Institutions • ETTs • Trainees • Researchers	• Document review • Kick-off workshop • Survey • KIIs • Monitoring data
3.8 What was the impact to the project relevance and effectiveness of the change of responsibilities on CN ETS between NDRC and MEE?	The programme has shown the required resilience to deal with this change	Qualitative feedback from involved stakeholders on impact of the administrative change	• Project Team • EU and Chinese Institutions • ETTs	• Document review • Kick-off workshop • KIIs

EQ4 – Achievement of wider effects (Impact):

Question	Judgement criteria	Indicators	Source of information	Collection methods
4. What evidence is there that the programme has contributed to its intended impact?				
4.1 Considering the situation at the beginning and at the end of the programme, to what extent it contributed to enhance cooperation with China on climate change by continuing to support China in building up a nationwide	There is clear evidence that the programme has contributed to enhancing EU-China cooperation on climate change and ETS.	• Qualitative feedback from involved stakeholders on the programme	• Project Team • EU and Chinese Institutions • ETTs	• Document review • Kick-off workshop • Survey • KIIs

Question	Judgement criteria	Indicators	Source of information	Collection methods
ETS as a means to reduce its GHG emissions?		contribution to its intended impact • Logframe outcome and impact indicators	• Researchers • Third parties (other development partners)	• Monitoring data
4.2 Were new institutional/governance or management practices on ETS applied on the side of China during the time of the project? Had the project a direct influence on those?	The programme directly contributed to the creation and implementation of new institutional/governance or management practices on ETS applied on the side of China.	• Qualitative feedback from involved stakeholders on new practices in the CN ETS • Logframe outcome and impact indicators	• Project Team • EU and Chinese Institutions • ETTs • Trainees • Researchers • Third parties (other development partners)	• Document review • Kick-off workshop • Survey • KIIs • Monitoring data
4.3 Has the programme been able to promote EU and/or international standards and regulations relating to the climate sector and ETS?	There is evidence that the programme has supported the knowledge transfer and, ideally, adoption of EU and/or international standards and regulations relating to the climate sector and ETS.	• Qualitative feedback from involved stakeholders on the acceptance and use of EU / international standards in the climate sector and ETS in China • Logframe outcome and impact indicators	• Project Team • EU and Chinese Institutions • ETTs • Trainees • Researchers • Third parties (other development partners)	• Document review • Kick-off workshop • Survey • KIIs • Monitoring data

EQ5 – Likely continuation of achieved results (Sustainability):

Question	Judgement criteria	Indicators	Source of information	Collection methods
5. What is the likelihood that the outcomes will be sustained after the end of the programme's funding period?				
5.1 To what extent has the programme built the basis for its benefits to continue after its end?	The programme's results (fostered of political dialogue between EU-China, built ETS capacity) are likely to stay and continue to produce	• Qualitative feedback from involved stakeholders on likelihood	• Project Team • EU and Chinese Institutions	• Document review • Kick-off workshop • Survey

Question	Judgement criteria	Indicators	Source of information	Collection methods
	benefits even after the end of the programme	of sustainable outcomes • Logframe outcome and impact indicators	• ETTs • Trainees • Researchers	• KIIs • Monitoring data
5.2 What are the major factors influencing the potential sustainability of the programme?	The programme has put in place a resilient sustainability strategy that is able to withstand external changes and barriers	Qualitative feedback from involved stakeholders on key factors and solutions implemented to build a resilient sustainability strategy	• Project Team • EU and Chinese Institutions • ETTs • Trainees • Researchers	• Document review • Kick-off workshop • KIIs
5.3 What key lessons can be learnt to the benefit of future EU actions in support of the CN ETS (e.g. EU-China Policy Dialogue on ETS II)? And to the benefits of other existing initiatives?	The programme has generated relevant lessons to the benefit of future EU actions in support of the CN ETS and other existing initiatives.	Qualitative feedback from involved stakeholders on lessons learnt	• Project Team • EU and Chinese Institutions • ETTs • Trainees • Researchers • Third parties (other development partners)	• Document review • Kick-off workshop • Survey • KIIs
5.4 How likely are the results of the joint research projects to be sustained after the end of the programme?	The programme has put in place mechanisms to have strong considerations about sustainability built into the joint research governance and projects	Qualitative feedback from involved stakeholders on sustainability of the joint research programme and results	• Project Team • EU and Chinese Institutions • Researchers	• Document review • Kick-off workshop • Survey • KIIs
5.5 Is there evidence showing the Chinese Emission Trading Trainers (ETTs) are capable of enhancing the capacity of Chinese ETS stakeholders without the programme's support?	There is evidence that the programme has selected and trained the right ETTs to promote the scaling up of ETS capacity within China at an appropriate scale and depth for the correct functioning of the CN ETS.	• Qualitative feedback from involved stakeholders on sustainability of the training of trainers and capacity building results • Logframe outcome and impact indicators	• Project Team • EU and Chinese Institutions • ETTs	• Document review • Kick-off workshop • Survey • KIIs • Monitoring data

EQ6 – EU Value Added:

Question	Judgement criteria	Indicators	Source of information	Collection methods
6. What additional value has the programme provided compared to similar actions carried out by EU Member States?				
6.1 What additional value have been brought by the specific features of this programme as opposed to one carried out by single EU Member States directly?	EU advantage in climate change and ETS policy and dialogue.	Qualitative feedback from involved stakeholders on EU advantages	• Project Team • EU and Chinese Institutions • ETTs • Researchers	• Document review • Kick-off workshop • Survey • KIIs
6.2 What additional value has been brought by the specific features of this programme in comparison to other initiatives in support of the CN ETS?	Comparison of this programme's outcomes with some projects funded by other donors.	Qualitative feedback from involved stakeholders on added value of this programme compared to others	• Project Team • EU and Chinese Institutions • ETTs • Trainees • Researchers • Third parties (other development partners)	• Document review • Kick-off workshop • Survey • KIIs

EQ7 – Coherence of the Action:

Question	Judgement criteria	Indicators	Source of information	Collection methods
7. How coherent and complementary is the programme with other interventions in China in the ETS area?				
7.1 To what extent is the programme coherent with the EU Green Deal, the EU strategy in China and the EU sectoral approach in ETS / the climate sector?	The programme's objectives and strategy are aligned with EU Green Deal, the EU strategy in China and the EU sectoral approach in ETS / the climate sector.	Qualitative feedback from involved stakeholders on the alignment with EU policies and strategies	• Project Team • EU and Chinese Institutions • Researchers	• Document review • Kick-off workshop • Survey • KIIs
7.2 What coherence and complementarities exist with other EU Member State actions in China?	The programme's objectives and strategy are complementary with (or at least do not duplicate efforts of) those of other EU Member State in China.	Qualitative feedback from involved stakeholders on coherence and complementarity with other EU Member State actions in China	• Project Team • EU and Chinese Institutions • Researchers	• Document review • Kick-off workshop • KIIs
7.3 What coherence and complementarities exist with other initiatives in support of the CN ETS?	The programme's objectives and strategy are complementary with (or at least do not duplicate efforts of)	Qualitative feedback from involved stakeholders on coherence and complementarity	• Project Team • EU and Chinese Institutions	• Document review • Kick-off workshop • KIIs

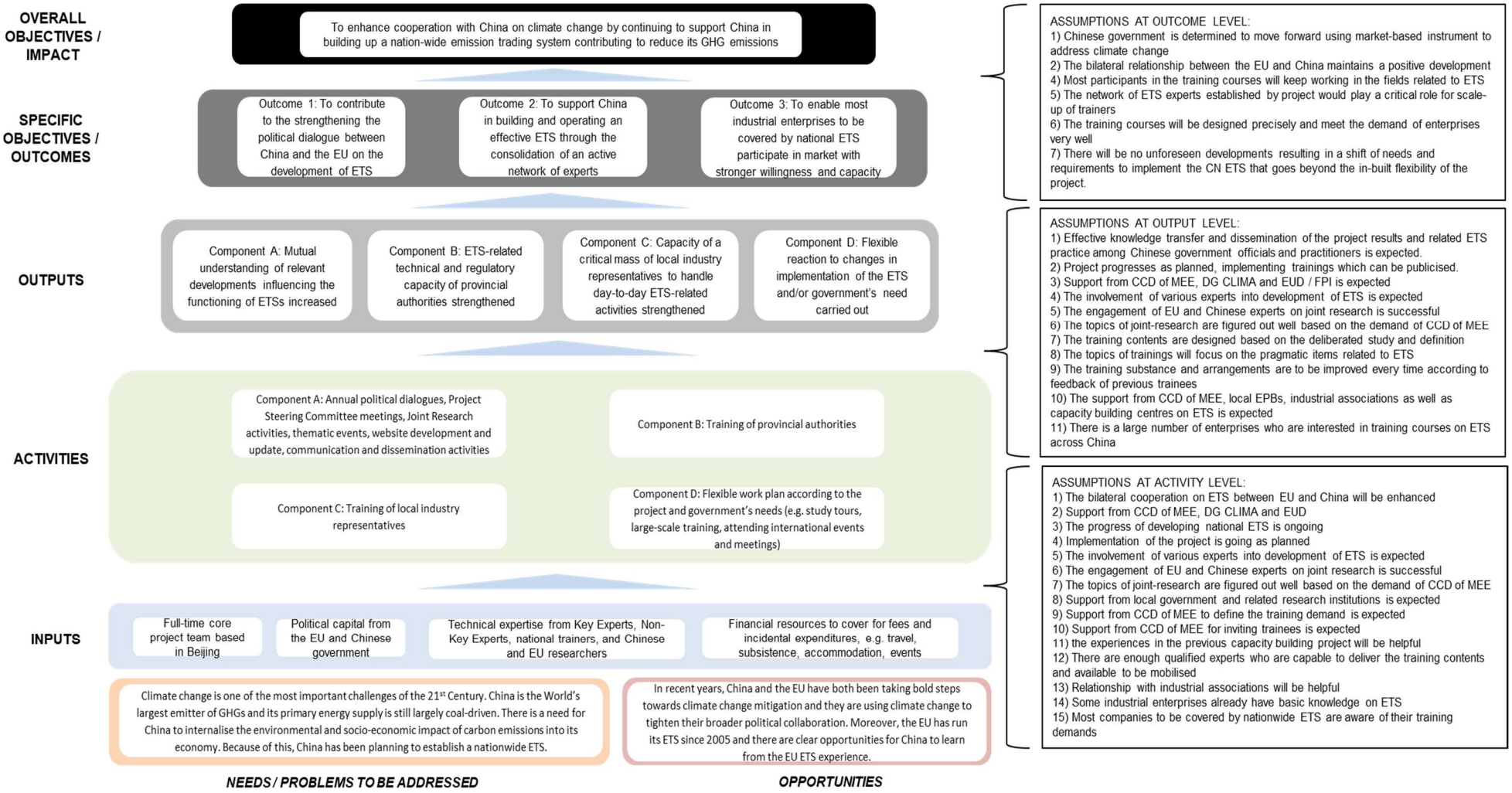
Question	Judgement criteria	Indicators	Source of information	Collection methods
	other initiatives in support of the CN ETS	with other initiatives in support of the CN ETS	• Researchers • Third parties (other development partners)	
7.4 How effective was the programme in exchanging knowledge and lessons with other initiatives in support of the CN ETS?	The programme successfully engaged and ideally coordinated its activities and strategy with other initiatives supporting the CN ETS.	Qualitative feedback from involved stakeholders on knowledge exchange and coordination with other initiatives	• Project Team • EU and Chinese Institutions • Third parties (other development partners)	• Document review • Kick-off workshop • KIIs

EQ8 – Cross-Cutting Issues:

Question	Judgement criteria	Indicators	Source of information	Collection methods
8. To what extent has the programme considered and successfully contributed to cross-cutting issues, such as gender, social inclusion and the Sustainable Development Goals (SDGs), and adhere to the principle of Leave No-One Behind and the rights-based approach methodology?				
8.1 To what extent has the programme team appropriately considered gender and social inclusion (GESI) in the programme design and strategy (e.g. through a gender analysis)?	The programme team appropriately considered gender and social inclusion (GESI) in the programme design and strategy (e.g. through a gender analysis).	• Qualitative feedback from involved stakeholders on the inclusion of GESI in the programme strategy • Existence of a gender analysis / strategy	• Project Team • EU and Chinese Institutions	• Document review • Kick-off workshop • KIIs
8.2 How were GESI considerations integrated in the programme implementation?	The programme has effectively implemented its GESI strategy, or in the absence of it, it has actively pursued GESI principles (e.g. equitable opportunities for gender, minority, religious, disability and other groups).	• Qualitative feedback from involved stakeholders on the inclusion of GESI in the programme strategy • Existence of GESI-inclusive activities and outputs	• Project Team • EU and Chinese Institutions • ETTs • Trainees • Researchers	• Document review • Kick-off workshop • Survey • KIIs
8.3 To what extent was the level of integration of GESI in the programme implementation appropriate to the characteristics of the Action (i.e. ETS, climate change mitigation)?	Considering the characteristics of the programme, the level of GESI in the implementation has been appropriate.	• Qualitative feedback from involved stakeholders on the appropriateness	• Project Team • EU and Chinese Institutions • ETTs	• Document review • Kick-off workshop • KIIs

Question	Judgement criteria	Indicators	Source of information	Collection methods
		of GESI inclusion • Comparison with other ETS supporting initiatives	• Trainees • Researchers • Third parties (other development partners)	
8.4 To what extent did the programme identify relevant SDGs, and appropriately and explicitly devised its strategy to contribute to their achievement?	The programme is consistent with China's efforts towards the achievement of SDGs	• Qualitative feedback from involved stakeholders on programme's contribution to SDGs in China • Existence of SDG complementarity analysis / strategy	• Project Team • EU and Chinese Institutions	• Document review • Kick-off workshop • KIIs
8.5 To what extent did the programme adhere appropriately and explicitly to the principle of Leave No-One Behind and the rights-based approach methodology?	The programme adhered appropriately and explicitly to the principle of Leave No-One Behind and the rights-based approach methodology, consistent with the characteristics of the programme (i.e. ETS, climate change mitigation). As a minimum, there is evidence that the programme has not led to the violation of those principles.	Qualitative feedback from involved stakeholders on the adherence to the principle of Leave No-One Behind and the rights-based approach methodology	• Project Team • EU and Chinese Institutions • ETTs • Trainees • Researchers	• Document review • Kick-off workshop • KIIs

Annex 5: Intervention logic / Theory of Change



Annex 6: List of persons/organisations consulted / Schedule of the interview phase

Date/Time	Organization/Institution	Meeting with (including affiliation and position)	Location of the meeting	Evaluation team Participants
Tuesday, 19 January 2021				
08:30 – 10:30	Kick-off Meeting with ICF	- Mads Jensen (ICF Project Director) - Renato Roldao (ICF Project Team Leader) - Wang Shu (ICF Key Expert)	Online	Andreas Oberheitmann Luca Petrarulo
12:00 – 18:00	Wrap-up			
Tuesday, 9 February 2021				
09:00 – 11:00	Meeting with ICF on Relevance and Efficiency	- Mads Jensen (ICF Project Director) - Renato Roldao (ICF Project Team Leader) - Wang Shu (ICF Key Expert)	Online	Andreas Oberheitmann Luca Petrarulo
12:00 – 18:00	Wrap-up			
Thursday, 18 February 2021				
09:00 – 11:00	Meeting with EU officials from DG CLIMA in Europe	- Johannes Enzmann (DG CLIMA)	Online	Andreas Oberheitmann Luca Petrarulo
12:00 – 18:00	Wrap-up			
Friday, 19 February 2021				
10:00 – 12:00	Meeting with ICF on Effectiveness and Impact	- Mads Jensen (ICF Project Director) - Renato Roldao (ICF Project Team Leader) - Wang Shu (ICF Key Expert) - Qian Guoqiang (ICF Key Expert)	Online	Andreas Oberheitmann Luca Petrarulo
12:30 – 18:30	Wrap-up			

Date/Time	Organization/Institution	Meeting with (including affiliation and position)	Location of the meeting	Evaluation team Participants
Monday, 22 February 2021				
09:00 – 11:00 12:00 – 18:00	Meeting with EUD officials (FPI) Wrap-up	- Stéphane Bauguil (FPI)	Online	Andreas Oberheitmann Luca Petrarulo
Tuesday, 23 February 2021				
09:00 – 10:30 12:00 – 18:00	Meeting with EUD officials (DG CLIMA) Wrap-up	- Octavian Stamate (DG CLIMA)	Online	Andreas Oberheitmann Luca Petrarulo
Tuesday, 2 March 2021				
09:30 – 11:30 12:00 – 18:00	Meeting with ICF on Sustainability and EU Value Added Wrap-up	- Mads Jensen (ICF Project Director) - Renato Roldao (ICF Project Team Leader) - Wang Shu (Key Expert)	Online	Andreas Oberheitmann Luca Petrarulo
Tuesday, 3 March 2021				
08:00 – 10:00 12:00 – 18:00	Meeting with the Ministry of Ecology and Environment (MEE) Wrap-up	- Mr. Liu Feng (Acting Division Director for ETS at the Department of Climate Change, MEE) - Ms. Zhang Minsi (NCSC)	Online	Andreas Oberheitmann Luca Petrarulo
Tuesday, 9 March 2021				
09:30 – 11:30 12:00 – 18:00	Meeting with ICF on Coherence and Cross-Cutting Issues Wrap-up	- Mads Jensen (ICF Project Director) - Renato Roldao (ICF Project Team Leader) - Wang Shu (Key Expert)	Online	Andreas Oberheitmann Luca Petrarulo

Date/Time	Organization/Institution	Meeting with (including affiliation and position)	Location of the meeting	Evaluation team Participants
Monday, 15 March 2021				
08:00 – 10:00	Meeting with trainers for Components B&C	- Wang Ke - Professor, Renmin University, Beijing - Gao Qingxian - Researcher, Chinese Research Academy of Environmental Sciences (CRAES) - Feng Xiangzhao - Researcher, Policy Research Center for Environment and Economy (PRCEE), MEE	Online	Andreas Oberheitmann Luca Petrarulo
12:00 – 18:00	Wrap-up			
Thursday, 18 March 2021				
08:00 – 10:00	Meeting with Researchers (Component A)	- Chen Zhibin (JR1) - SinoCarbon - Zhang Xin (JR2) - Chief Economist at NCSC - Zhou Li (subgroup 1 of JR3) - Associate Professor, Tsinghua University - Tong Qing (subgroup 2 of JR3) - Associate Professor, Tsinghua University	Online	Andreas Oberheitmann Luca Petrarulo
12:00 – 18:00	Wrap-up			
10:00 – 12:00	Meeting with local government authorities e.g. Environmental Protection Bureaus as technical Trainees (Component B)	- Zhang Huiying - Gansu Provincial Ecology & Environmental Department - He Wenjuan - Qinghai Provincial Ecology & Environmental Department - Chen Yijun - Deputy Director, Guangdong Provincial Ecology &	Online	Andreas Oberheitmann Luca Petrarulo

Date/Time	Organization/Institution	Meeting with (including affiliation and position)	Location of the meeting	Evaluation team Participants
14:00 – 18:00	Wrap-up	Environmental Department - Tan Xiaoxin - Zhongshan Municipal Ecology & Environmental Department		
Tuesday, 30 March 2021				
09:00 – 11:00 12:00 – 18:00	Meeting with international researchers (non-key experts Component A) Wrap-up	- Michael Mehling (JR2, MIT) - Wolfgang Eichhammer (Subgroup 1 of JR3, Fraunhofer ISI) - Sean Healy (Subgroup 2 of JR3, Öko-Institut)	Online	Andreas Oberheitmann Luca Petrarulo
Thursday, 1 April 2021				
08:00 – 10:00 12:00 – 18:00	Meeting with Chinese Researchers (Component A) Wrap-up	- Prof. Duan Maosheng (Tsinghua University, Institute for Nuclear and New Energy Technology)	Online	Andreas Oberheitmann Luca Petrarulo
Friday, 2 April 2021				
08:00 – 10:00	Meeting with local industry representatives as Trainees Component C	- Wang Hui, Senior Manager Guangdong Energy Group Co., LTD. - Huang Hongfei, Senior Manager Zhejiang Energy Group Co., LTD. - Feng Tianfeng, Senior Manager China Energy	Online	Andreas Oberheitmann Luca Petrarulo

Date/Time	Organization/Institution	Meeting with (including affiliation and position)	Location of the meeting	Evaluation team Participants
10:00 – 12:30 14:00 – 18:30	Meeting with representatives from Environmental Exchanges (Component C) Wrap-up	- Meng Meng, Senior Manager, China Emissions Exchange (CNEMISSION)	Online	Andreas Oberheitmann Luca Petrarulo
Thursday, 22 April 2021				
09:00 – 10:00 11:00 – 18:00	Debriefing with EUD and DG CLIMA Wrap-up	- Stéphane Bauguil (FPI) - Johannes Enzmann (DG CLIMA) - Octavian Stamate (DG CLIMA)	Online	Andreas Oberheitmann Luca Petrarulo
Monday, 10 May 2021				
08:00 – 9:00 11:00 – 18:00	Final Presentation with EUD (FPI), DG CLIMA Wrap-up	- Stéphane Bauguil (FPI) - Johannes Enzmann (DG CLIMA)	Online	Andreas Oberheitmann Luca Petrarulo

Annex 7: List of interviewed stakeholders

No.	Person / Institution	Group interview
1	Tsinghua University, Beijing	Chinese Researchers (Component A)
2	SinoCarbon	Chinese Researchers (Component A)
3	SQ Consult	EU Researchers (Component A)
4	National Center for Climate Change Strategy and International Cooperation (NCSC)	Chinese Researchers (Component A)
5	MIT EDU	EU Researchers (Component A)
6	Tsinghua University, Beijing	Chinese Researchers (Component A)
7	Independent consultant	EU Researchers (Component A)
8	Tsinghua University, Beijing	Chinese Researchers (Component A)
9	Öko-Institut	EU Researchers (Component A)
10	National Center for Climate Change Strategy and International Cooperation (NCSC)	Trainers (Component B & C)
11	Renmin University, Beijing	Trainers (Component B & C)
12	SinoCarbon	Trainers (Component B & C)
13	Policy Research Center for Environment and Economy (PRCEE), MEE	Trainers (Component B & C)
14	Chinese Research Academy of Environmental Sciences (CRAES)	Trainers (Component B & C)
15	Shanghai Environment and Energy Exchange (CNEEEX)	Environmental Exchanges
16	China Emissions Exchange (CNEMISSION)	Environmental Exchanges
17	Gansu Provincial Ecology & Environmental Department	Local authorities - Trainees (Component B)
18	Ningxia Provincial Ecology & Environmental Department	Local authorities - Trainees (Component B)
19	Sichuan Provincial Ecology & Environmental Department	Local authorities - Trainees (Component B)

20	Qinghai Provincial Ecology & Environmental Department	Local authorities - Trainees (Component B)
21	Jiangsu Provincial Ecology & Environmental Department	Local authorities - Trainees (Component B)
22	Guangdong Provincial Ecology & Environmental Department	Local authorities - Trainees (Component B)
23	Zhongshan Municipal Ecology & Environmental Department	Local authorities - Trainees (Component B)
24	Shenzhen Municipal Ecology & Environmental Department	Local authorities - Trainees (Component B)
25	Guangdong Energy Group Co., LTD.	Industry reps - Trainees (Component C)
26	Zhejiang Energy Group Co., LTD.	Industry reps - Trainees (Component C)
27	China Huadian Corporation LTD.	Industry reps - Trainees (Component C)
28	China Energy	Industry reps - Trainees (Component C)
29	China Huaneng Group Co., LTD.	Industry reps - Trainees (Component C)
30	China Datang Corporation LTD.	Industry reps - Trainees (Component C)
31	SHENERGY	Industry reps - Trainees (Component C)
32	China National Offshore Oil Corporation (CNOOC)	Industry reps - Trainees (Component C)
33	National Center for Climate Change Strategy and International Cooperation (NCSC)	NCSC
Donors contacted via e-mail		
34-37	• Environmental Defense Fund • Gesellschaft für internationale Zusammenarbeit • World Bank • Ministry of Foreign Affairs Norway	Other international donors in the field of ETS

Annex 8: Literature and documentation consulted

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- RfA JR2 Jan 17th meeting final
- RfA JR3 kick-off meeting Jan2020
- RfA of the training in Luzhou City under Component B_20201211
- RfA of the training in Shenzhen under Component B_20201211
- RfA workshop on benchmark _Jan15_162020
- RfE long term mobilisation JR2 final
- Second Interim Report – Narrative Report
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- Zhang, Haijun and Duan, Maosheng (2020): China's pilot emissions trading schemes and competitiveness: An empirical analysis of the provincial industrial sub-sectors. Journal of Environmental Management Volume 258, 15 March 2020, 109997.

Annex 9: Statistical analysis of the online survey

Statistics: Questionnaire "Final Evaluation EU-China ETS Programme"

1. What is your gender?

	Answers	Ratio
Male -	6	85.71 %
Female -	1	14.29 %
No Answer	0	0 %

2. Which stakeholder group do you belong to?

	Answers	Ratio
EU/MEE/Project Team -	4	57.14 %
Researcher Component A -	1	14.29 %
Trainer Component B&C -	3	42.86 %
Trainee Component B -	1	14.29 %
Trainee Component C -	0	0 %
No Answer	0	0 %

3. These are the programme s priorities:
a) to increase the mutual understanding of relevant developments affecting the effectiveness and efficiency of emission trading systems in the EU and China, and b) to support the Chinese counterpart in building the technical and regulatory capacity of emission trading to authorities, industry representatives and verifiers in China.

To what extent are they in line with the sectoral policies and the programming / strategy documents adopted in China in the climate sector and in particular on Emissions trading?

	Answers	Ratio
Not in line	0	0 %
Partly in line	0	0 %
Sufficiently in line	3	42.86 %
Highly in line	4	57.14 %
Do not know or not applicable	0	0 %
No Answer	0	0 %

4. Do you agree is there coherence and complementarity with the MoU on ETS signed between the EU and China?

	Answers	Ratio
Disagree completely -	0	0 %
Somewhat disagree -	0	0 %
Somewhat agree -	2	28.57 %
Completely agree -	5	71.43 %
Do not know or not applicable -	0	0 %
No Answer	0	0 %

5. Do you agree, that the activities and outputs of the programme are consistent with the overall and specific objectives of the programme?

	Answers	Ratio
Disagree completely -	0	0 %
Somewhat disagree -	0	0 %
Somewhat agree -	4	57.14 %
Completely agree -	3	42.86 %
Do not know or not applicable -	0	0 %
No Answer	0	0 %

6. Were the key stakeholders and target groups selected for institutional capacity building relevant to address the programme s priorities?

	Answers	Ratio
Irrelevant -	0	0 %
Partly relevant -	0	0 %
Relevant -	1	14.29 %
Highly relevant -	6	85.71 %
Do not know or not applicable -	0	0 %
No Answer	0	0 %

7. To what extent did external factors or context changes during the programme implementation positively or negatively impact the importance of the programme for its key stakeholders and target groups? Examples of external factors / context changes:
a) COVID-19
b) Administrative changes (e.g. from NDRC to MEE)
c) Staff turnover in the government
d) Carbon neutrality target announcement

a) COVID-19

	Answers	Ratio
Negligible -	0	0 %
Modest -	0	0 %
Moderate -	1	14.29 %
Substantial -	6	85.71 %
Do not know or not applicable -	0	0 %
No Answer	0	0 %

b-d) No responses

8. Are the arrangements in terms of monitoring of the activities implemented and of the project overall satisfactory (i.e. useful and practical)?

	Answers	Ratio
Not at all -	0	0 %
Partly -	0	0 %
Sufficiently -	0	0 %
Highly -	3	42.86 %
Do not know or not applicable -	4	57.14 %
No Answer	0	0 %

9. Was the pace of implementation of the project satisfactory according to the budget, timeframe and circumstances prevailing?

	Answers	Ratio
Not at all -	0	0 %
Partly -	0	0 %
Sufficiently -	3	42.86 %
Highly - ;	4	57.14 %
Do not know or not applicable -	0	0 %
No Answer	0	0 %

10. Is the implementation of the programme activities cost efficient? Are the modalities in place for programme management and implementation efficient, especially considering the Contractor set up, the location of the programme team, as well as the sub-contractors involved?

	Answers	Ratio
Not efficient -	0	0 %
Partly efficient -	0	0 %
Sufficiently efficient -	1	14.29 %
Highly efficient -	6	85.71 %
Do not know or not applicable -	0	0 %
No Answer	0	0 %

11. Considering the inputs used, were the outputs delivered by the programme of the appropriate quality standards?

	Answers	Ratio
Not appropriate -	0	0 %
Partly appropriate -	0	0 %
Significantly appropriate -	3	42.86 %
Highly appropriate -	4	57.14 %
Do not know or not applicable -	0	0 %
No Answer	0	0 %

12. To what extent was the project efficient in increasing dissemination, replication potential and knowledge transfer?

	Answers	Ratio
Not at all -	0	0 %
Partly -	0	0 %
Sufficiently -	2	28.57 %
Highly -	5	71.43 %
Do not know or not applicable -	0	0 %
No Answer	0	0 %

13. To what extent has the programme achieved to deliver its intended outputs?

	Answers	Ratio
Output 1: Appropriate visibility of the ETS project -	7	100%
Output 2: Steering provided to the ETS project and identification of topics of mutual interest -	6	85.71%
Output 3: Web-based platform for Chinese ETS experts established -	4	57.14%
Output 4: Enhanced knowledge & engagement on ETS of experts following their participation in annual ETS expert workshops -	6	85.71%
Output 5: Joint research paper of Chinese and European experts created -	3	42.86%
Output 6: On-the-job experience gained is transferable to the administration at both central and local level -	6	85.71%
Output 7: Better understanding of ETS regulation and compliance -	7	100%
Output 8: Enhanced knowledge of the industry on operational tasks related to ETS -	6	85.71%
Output 9: Online training software delivered for industrial enterprises -	4	57.14%
No answer	0	0%

14. To what extent has the programme achieved its intended outcome: a) The political dialogue between China and the EU on the development of ETS is strengthened and research exchanges between the EU and China on ETS are promoted?

	Answers	Ratio
Negligible -	0	0 %
Modest -	0	0 %
Moderate -	0	0 %
Substantial -	7	100 %
Do not know or not applicable -	0	0 %
No Answer	0	0 %

14a. To what extent has the programme achieved its intended outcome: b) Capacities on emission trading on the side of the Chinese government authorities and the industries involved are significantly Strengthened?

	Answers	Ratio
Negligible -	0	0 %
Modest -	0	0 %
Moderate -	2	28.57 %
Substantial -	5	71.43 %
Do not know or not applicable -	0	0 %
No Answer	0	0 %

14b. To what extent has the programme achieved its intended outcomes: c) The familiarity of Chinese industry representatives to handle day-to-day actions required under an emission trading system is sufficiently enhanced?

	Answers	Ratio
Negligible -	0	0 %
Modest -	0	0 %
Moderate -	1	14.29 %
Substantial -	6	85.71 %
Do not know or not applicable -	0	0 %
No Answer	0	0 %

15. If you know, what do you consider to be the biggest challenge for the programme?

	Answers	Ratio
Change of government responsibility from NDRC to	1	14.29%
COVID-19 pandemic -	6	85.71%
Geographical differences in China in awareness and knowledge of ETS -	2	28.57 %
No Answer	0	0 %

16. If you know, what do you consider to be the biggest enabling factor for the programme?

	Answers	Ratio
The ability of the programme to access the experience of EU ETS experts and researchers -	2	28.57%
The alignment of the programme s objectives with both the EU and China climate change goals about carbon neutrality -	6	85.71%
The availability for the programme of the lessons from the seven Chinese ETS pilots -	3	42.86%
No Answer	0	0 %

17. Were there geographic differences in the effectiveness of the project to build ETS capacity?

	Answers	Ratio
1) No differences to be worth mentioning -	1	14.29 %
2) Yes, but only because some provinces had been part of the ETS pilots, and others had not -	5	71.43 %
3) Yes, because of other reasons -	1	14.29 %
No Answer	0	0 %

18. Have the behavioural patterns changed in the beneficiary organisations and groups at various levels?

	Answers	Ratio
Negligible -	0	0 %
Modest -	2	28.57 %
Moderate -	2	28.57 %
Substantial -	3	42.86 %
Do not know or not applicable -	0	0 %
No Answer	0	0 %

19. How far have the changed institutional arrangements and characteristics resulted in the planned improvements?

	Answers	Ratio
Negligible -	0	0 %
Modest -	1	14.29 %
Moderate -	4	57.14 %
Substantial -	1	14.29 %
Do not know or not applicable -	1	14.29 %
No Answer	0	0 %

20. To what extent the change of responsibilities on CN ETS between NDRC and MEE had a negative impact on the project implementation?

	Answers	Ratio
Negligible -	1	14.29 %
Modest -	5	71.43 %
Moderate -	2	28.57 %
Substantial -	0	0 %
Do not know or not applicable -	0	0 %
No Answer	0	0 %

21. How effective was the programme to exchange knowledge and lessons with other initiatives in support of the CN ETS?

	Answers	Ratio
Negligible -	0	0 %
Modest -	0	0 %
Moderate -	3	42.86 %
Substantial -	4	57.14 %
Do not know or not applicable -	0	0 %
No Answer	0	0 %

22. Considering the situation at the beginning and at the end of the programme, to what extent it contributed to enhance cooperation with China on climate change by continuing to support China in building up a nation-wide ETS as a means to reduce its GHG emissions?

	Answers	Ratio
Negligible -	0	0 %
Modest -	0	0 %
Moderate -	3	42.86 %
Substantial -	4	57.14 %
Do not know or not applicable -	0	0 %
No Answer	0	0 %

23. Were new institutional/governance or management practices on ETS applied on the side of China during the time of the project? Did the project has a direct influence on those?

	Answers	Ratio
Not at all -	0	0 %
Partly -	1	14.29 %
Sufficiently -	4	57.14 %
Highly -	2	28.57 %
Do not know or not applicable -	0	0 %
No Answer	0	0 %

24. Has the programme been able to promote EU and/or international standards and regulations relating to the climate sector and ETS?

	Answers	Ratio
Not at all -	0	0 %
Partly -	0	0 %
Sufficiently -	5	71.43 %
Highly -	2	28.57 %
Do not know or not applicable -	0	0 %
No Answer	0	0 %

25. To what extent has the programme built the basis for its benefits to continue after the EU funding ceases?

	Answers	Ratio
Negligible -	0	0 %
Modest -	0	0 %
Moderate -	2	28.57 %
Substantial -	5	71.43 %
Do not know or not applicable -	0	0 %
No Answer	0	0 %

26. If you know, what do you consider to be the most important factor for the programme to have outcomes that will remain in the long-term?

	Answers	Ratio
1) Strong political commitment by the European Commission and the Chinese Government to supporting a robust and functioning Chinese ETS -	7	100 %
2) The availability of a community of highly qualified Chinese trainers -	3	42.86%
3) The availability of joint research groups composed by European and Chinese ETS experts -	3	42.86%
4) Having a flexible programme that can adapt to the needs of Chinese stakeholders - as they arise -	4	57.14%
No Answer	0	0 %

27. How do you judge the likelihood that the results of the joint research projects to be sustained after the end of the project funding period?

	Answers	Ratio
Negligible -	0	0 %
Modest -	0	0 %
Moderate -	1	14.29 %
Substantial -	6	85.71 %
Do not know or not applicable -	0	0 %
No Answer	0	0 %

28. Is there evidence showing the Chinese Emission Trading Trainers (ETTs) are capable to enhance the capacity of Chinese ETS stakeholders without the programme s support?

	Answers	Ratio
Not at all -	0	0 %
Partly -	0	0 %
Sufficiently -	3	42.86 %
Highly -	4	57.14 %
Do not know or not applicable -	0	0 %
No Answer	0	0 %

29. To what extent has this programme shown EU added value considering its main objectives? What value added was this?

	Answers	Ratio
Negligible -	0	0 %
Modest -	0	0 %
Moderate -	3	42.86 %
Substantial -	4	57.14 %
Do not know or not applicable -	0	0 %
No Answer	0	0 %

30. What was the most important added value by the fact that the programme's international counterpart was the European Commission compared to any single EU Member State?

	Answers	Ratio
The possibility to learn from the EU ETS experience -	5	71.43 %
The fact that the EU climate change policy is determined by the European Commission, not by the single EU Member States -	4	57.14 %
The possibility of the ETS cooperation to positively influence broader EU-China negotiations in other sectors ETS -	2	28.57 %
The access to a larger pool of European ETS experts	3	42.86 %
No Answer	0	0 %

31. If you know of other internationally funded initiatives supporting the Chinese ETS (e.g. funded by the World Bank, Germany / GIZ, Norway, Asian Development Bank), do you think this programme performed:

	Answers	Ratio
Worse -	0	0 %
About the same -	2	28.57 %
Better -	2	28.57 %
Much better	3	42.86 %
Do not know or not applicable	0	0 %
No Answer	0	0 %

32. To what extent is the programme coherent with the EU Green Deal, the EU strategy in China and the EU sectoral approach in ETS / the climate sector?

	Answers	Ratio
Negligible -	0	0 %
Modest -	0	0 %
Moderate -	2	28.57 %
Substantial -	4	57.14 %
Do not know or not applicable -	1	14.29 %
No Answer	0	0 %

33. To what extent is the programme coherent and complementary with other EU Member State actions in China?

	Answers	Ratio
Negligible -	0	0 %
Modest -	1	14.29 %
Moderate -	3	42.86 %
Substantial -	3	42.86 %
Do not know or not applicable -	0	0 %
No Answer	0	0 %

34. To what extent is the programme coherent and complementary with other initiatives in support of the CN ETS?

	Answers	Ratio
Negligible -	0	0 %
Modest -	0	0 %
Moderate -	3	42.86 %
Substantial -	4	57.14 %
Do not know or not applicable -	0	0 %
No Answer	0	0 %

35. To what extent the programme coordinated its strategy and activities with those of other initiatives in support of the CN ETS?

	Answers	Ratio
Negligible -	0	0 %
Modest -	0	0 %
Moderate -	3	42.86 %
Substantial -	4	57.14 %
Do not know or not applicable -	0	0 %
No Answer	0	0 %

36. To what extent has the programme team appropriately considered gender equality and social inclusion (GESI) in the programme design and strategy (e.g. through a gender analysis)?

	Answers	Ratio
Negligible -	0	0 %
Modest -	2	28.57 %
Moderate -	3	42.86 %
Substantial -	2	28.57 %
Do not know or not applicable -	0	0 %
No Answer	0	0 %

37. To what extent was the level of integration of GESI in the programme implementation appropriate to the characteristics of the Action (i.e. ETS, climate change mitigation)?

	Answers	Ratio
Negligible -	0	0 %
Modest -	0	0 %
Moderate -	4	57.14 %
Substantial -	1	14.29 %
Do not know or not applicable -	2	28.57 %
No Answer	0	0 %

38. To what extent did the programme identify relevant SDGs and appropriately and explicitly devised its strategy to contribute to their achievement?

	Answers	Ratio
Negligible -	0	0 %
Modest -	0	0 %
Moderate -	3	42.86 %
Substantial -	4	57.14 %
Do not know or not applicable -	0	0 %
No Answer	0	0 %

39. To what extent did the programme adhere appropriately and explicitly to the principle of Leave-No-One Behind and the rights-based approach methodology?

	Answers	Ratio
Negligible -	0	0 %
Modest -	0	0 %
Moderate -	4	57.14 %
Substantial -	3	42.86 %
Do not know or not applicable -	0	0 %
No Answer	0	0 %

Annex 10: Detailed answers to the Evaluation Questions, judgement criteria and indicators

EQ1 – Problems and needs (Relevance):

Question	Judgement criteria	Indicators	Answers
1. To what extent the EU-China ETS programme (hereafter "the programme") addresses identified problems and needs?			
1.1 To what extent are the programme priorities in line with the sectoral policies and the programming / strategy documents adopted in the EU and China in the climate sector and in particular on emissions trading?	The programme is in line and directly reinforces EU and China's policies in the climate sector and emissions trading	Qualitative feedback from involved stakeholders on the alignment with key areas	• The EU-China ETS programme is very relevant to the EU strategic relations with China as climate change is one of the important EU dialogue fields between the two entities. • In order to effectively and efficiently implement a national emission trading system in China, various elements and capacities are needed to be in place, inter alia: ○ Determination of baselines or benchmarks for different technologies and installation sizes in various sectors of the economy (power and heat generation, iron and steel, chemical industry, pulp and paper etc.). ○ Effective measuring, reporting and verification (MRV) of the emission reductions against the benchmarks and central/regional registration of the allowances. ○ Administration of the allocation and management of allowances and other issues related to the operation of a nationwide emissions trading system on the local level, e.g. in provincial/local Environmental Protection Bureaus. ○ Familiarity of Chinese industry representatives to handle day-to-day actions required under an emission trading system.
1.2 To what extent is there coherence and complementarity with the MoU on ETS signed between the EU and China?	The programme respects the objectives, roles and responsibilities included in MoU	Qualitative feedback from involved stakeholders on the alignment with the MoU	• According to the MoU on ETS signed between the EU Commission and the MEE of the People's Republic of China in 2018, there is need for enhanced cooperation between the two parties against the background of the roll-out of the national ETS in China and the revisions of the EU ETS in order to combat climate change. More specifically, in order to effectively and efficiently implement a national emission trading system in China, various elements and capacities are needed to be in place.

Question	Judgement criteria	Indicators	Answers
1.3 Are the activities and outputs of the programme consistent with respectively the overall and specific objectives of the programme?	The programme's activities and outputs are consistent with the programme's objectives	• Qualitative feedback from involved stakeholders on the consistency • Logframe output indicators	• The activities and outputs of the programme with its four components (A, B, C, D) are consistent with respectively the overall objective to "enhance cooperation with China on climate change by continuing to support China in building up the CN ETS to reduce its GHG emissions" and specific objectives of the programme to (a) establish and continue regular policy dialogue and JR on ETS, (b) enhance capacity of China to operate the national ETS, (c) to enhance industry capacity to handle ETS day-to-day actions and (d) to hold consolidated annual meetings of the PSC. • It was a good design decision to include a Component D in the programme to be able to adapt to unexpected developments and changes in the framework conditions of the programme.
1.4 Were the key stakeholders and target groups selected for institutional capacity building relevant to address the programme's priorities?	Stakeholders and target groups are the right ones to address the programme's priorities	Qualitative feedback from involved stakeholders about the appropriateness of the stakeholder selected	• The development of a national ETS is a tremendous work including different stakeholders including national and local government authorities, industry, third party verifiers, research institutes and financial entities. They can be regarded as suitable and relevant for different reasons and subsequently addressed by the different components of the programme.
1.5 To what extent did external factors or context changes during the programme implementation (a) positively or (b) negatively impact the relevance of the programme for its key stakeholders and target groups?	• The programme's goals and specific objectives and needs are still valid. • Several assumptions and causal pathways outlined in the Theory of Change remain valid, after adaptations and refinements.	Qualitative feedback from involved stakeholders on the impact of external factors	• Changes in the preferences of the CC Dept. to direct training and shift of responsibilities in the Chinese government for ETS issues from NDRC to MEE: Increased needs of local EPBs. Programme reacted with direct training, training at local level (60-70 trainings in all provinces). • Pledge of the Chinese government to achieve a carbon neutral economy in China by 2060. BAU: World would be about 2.7 °C warmer by 2100 vs. pre-industrial levels. Achievement of 2060 goal: trajectory flattened by 0.3 degrees. This also increases relevance and need of the stakeholders for a functioning ETS. • COVID-19 pandemic: Due to the relatively quick recovery in China, limited impact on the political priorities and hence on the relevance of the ETS in China.

EQ2 – Sound management and value for money (Efficiency):

Question	Judgement criteria	Indicators	Answers
2. To what extent is the relationship between programme inputs and outputs timely, cost-efficient, and to expected quality standards?			

Question	Judgement criteria	Indicators	Answers
2.1 Is the implementation of the programme activities cost efficient? Are the modalities in place for programme management and implementation efficient, especially considering the Contractor set up, the location of the programme team, as well as the sub-contractors involved?	The project management arrangements put in place by the programme are efficient.	• Qualitative feedback from involved stakeholders on efficiency of project management • Logframe output indicators	• According to the information gathered by the evaluation, the project has been using the available resources in a cost-effective way. In particular, the high level of flexibility in managing the reallocation of the budget between project components to address changes in context and implementation circumstance was one of the keys of success of the project. • The evaluation also confirms that the project has been managed cost-efficiently. The main example of cost-efficiency provided was about savings in training cost due to the transfer of certain costs to the Chinese government. Based on ICF's estimations, it was assumed the transfer of some training costs to China have saved roughly EUR 130,000 to the project budget over 14 trainings delivered under Component B during the period from October 2020 to January 2021. • The EU Delegation expects that in the future, e.g. in the next EU-China ETS project, the EU budget will only cover for costs related to the trainers, while all organisational costs, including meals and venues, will be paid by China. These provisions should be agreed upon and clearly stated in a Memorandum of Understanding (MoU) between EU and China before the beginning of the EU-China ETS Project Phase II. • There are two instances to be reported that can generally be considered cost-effective because they indeed served well the pursuit of the project goals, but not very cost-efficient because they either involved major revisions to the budget or a disproportionate attribution of costs to the project: ○ The first case is the transfer of a large amount of incidental expenditure budget (about EUR 1.35 million out of EUR 4 million of total incidental budget) to fees at short notice to replenish the exhausted fee budget, due to the need of large-scale training from the Chinese counterpart during October-November 2019. The evaluators understand the different needs of FPI and DG CLIMA, respectively of a high degree of certainty in the financial management and planning, and of an effective use of resources to pursue the technical and political goals of the project. Flexibility has been certainly one of the keys of success of this programme and FPI has demonstrated to be a flexible instrument (see also above). However, even flexibility needs to be limited to a reasonable degree.

Question	Judgement criteria	Indicators	Answers
			○ The second instance concerns the fact that some expenses for the large-scale training in late 2019 were shared by the EU with other donors. Although cost sharing could have been considered positive evidence of cost-efficiency, here the EU appears to have covered roughly 80% of the whole financial effort for the large-scale training, which is disproportionately high compared to what other donors have provided. • The programme management structure appears to be adequate to support the achievement of the goals of the project.
2.2 Are the arrangements in terms of monitoring of the activities implemented and of the project overall satisfactory (i.e. useful and practical)?	A functional M&E framework has been appropriately designed, set up and functioning	• Qualitative feedback from involved stakeholders on efficiency of the M&E framework • Appropriateness and completeness of the logframe indicators	• The evidence confirms that the monitoring and reporting arrangements of the EU-China ETS programme seem to be useful and practical. • The EU expressed its satisfaction with ICF as a reliable and very professional contractor. • Despite that, recurrent delays of ICF in submitting interim reports were reported. The time for preparation of the Interim Reports increased over the course of the project leading to increasing delays in reporting. The time between the end of the reporting period and the time of submission almost quadrupled from the First Interim Report (Oct 2017 – Mar 2018) - Submitted in June 2018: 3 months to the Fifth Interim Report (Oct 2019 – March 2020) – submitted after 12 months. • Despite these delays were reported not to have a relevant impact on the project implementation because there were other effective ways of reporting on progress, the growing trend in the reporting periods need to be urgently reversed by the PT to improve the project accountability towards the EU.
2.3 Was the pace of implementation of the project satisfactory according to the budget, timeframe and circumstances prevailing?	The project was delivered on time and on budget and, any potential divergences from the plan have been acted upon successfully.	• Qualitative feedback from involved stakeholders on delays • Timeliness of the delivery of outputs and outcomes (incl. budget spending) • Pace of the financial expenditures	• The delivery of the outputs was satisfactory and according to the project schedule. • In general, the pace of project implementation has been reported as irregular or “wavy”, with moments of calm and sudden accelerations followed by further decelerations. • The three main factors that caused slow-downs in the project implementation are: ○ Change in leadership of the NDRC in late 2017, when the project had just started;

Question	Judgement criteria	Indicators	Answers
		Effectiveness of the measures adopted to reduce the delays	○ The restructuring of the climate change responsibilities within the Chinese government, and in particular from the NDRC to the MEE; ○ The COVID-19 pandemic. • In conclusion, the built-in flexibility of the project design (e.g. having Component D), the flexibility in the FPI procedures (e.g. 14-day notice for approving Terms of References (ToRs) of new activities, transfer of incidentals to fees, No-Cost Extension), and the credibility built by the PT in the eyes of the Chinese counterparts (e.g. continuity of Team Leader from previous project, Key Experts coming from NDRC and/or with pioneering pilot ETSs in China) allowed the project to strongly mitigate the impact of these external barriers. • In contrast, there were three main exogenous factors that implied an acceleration of the project pace: ○ The request at short notice to support a large-scale training effort throughout China during October and November 2019; ○ The pledge of the Chinese government in September 2020 to achieve a carbon neutral economy in China by 2060; ○ The public release by the MEE of the draft national ETS measures in November 2020.
2.4 Considering the inputs used, were the outputs delivered by the programme of the appropriate quality standards?	The programme's outputs are of high quality, according to the project beneficiaries	Qualitative feedback from involved stakeholders on the level of satisfaction with the quality of outputs	• The project team, the EU and the Chinese counterpart all confirm that the quality of the outputs and the services delivered by the project has been high. • It was also communicated that the project team put in place an effective quality assurance process of the training material.
2.5 To what extent was the programme efficient in increasing dissemination, replication potential and knowledge transfer?	The programme has been successful in disseminating key results and lessons, and in pursuing their scale-up and replication.	• Qualitative feedback from involved stakeholders on efficiency of dissemination • Logframe output and outcome indicators about training and awareness raising	• In terms of knowledge transfer potential, there is evidence that the PT has been very active in exchanging knowledge with other initiatives in the ETS area. • Furthermore, concerning the project's ability to increase dissemination and knowledge transfer to its target groups, there is evidence that there was a learning curve during the project implementation and some key lessons have been learnt.

Question	Judgement criteria	Indicators	Answers
			• The interview with MEE representatives highlighted that the fact that there is continuity of support by the EU on ETS has been seen as very helpful. • The replication potential of the project has been rated high. In particular, the establishment of two communities of trainers (under Component B and C) and researchers (under Component A) has been seen as a very important legacy for the future, including further continuation of JR and training in the Phase II project.

EQ3 – Achievement of purpose (Effectiveness):

Question	Judgement criteria	Indicators	Answers
3. To what extent has the programme delivered intended outputs and achieved outcomes (both intended and unintended)?			
3.1 To what extent has the programme achieved delivery of its intended outputs? • Output 1: Appropriate visibility of the ETS project • Output 2: Steering provided to the ETS project and identification of topics of mutual interest • Output 3: Web-based platform for Chinese ETS experts established • Output 4: Enhanced knowledge & engagement on ETS of experts following their participation in annual ETS expert workshops • Output 5: Joint research paper of Chinese and European experts created	The programme has achieved or exceeded its targets in terms outputs.	• Qualitative feedback from involved stakeholders on the output delivered • Logframe output indicators	• Output 1: Appropriate visibility of the ETS project. A detailed "Communication, Visibility and Engagement Strategic Plan" (shared with the evaluation team) was prepared and approved by the EU Delegation in March 2019. The project has been very active in its outreach activities targeting different groups and have delivered: ○ A bilingual (English and Chinese) project website / knowledge platform that to date has received over 180 thousand visits from about 103 thousand different people (with unique IP address). ○ A WeChat group of training alumni with 4,120 members; ○ A LinkedIn group with 405 subscribers; ○ MS Teams groups with 64 members from the JR experts. • Output 2: Steering provided to the ETS project and identification of topics of mutual interest. The project has received good steering from the PSC with different stakeholders represented. • Output 3: Web-based platform for Chinese ETS experts established. A web-based platform was established on Microsoft (MS) Teams and made accessible to the JR researchers, the project team, and DG CLIMA through a password. The project also created thematic WeChat groups that cut across the JR groups. These were used as discussion forums on relevant topics, rather than working platforms.

Question	Judgement criteria	Indicators	Answers
• Output 6: On-the-job experience gained is transferable to the administration at both central and local level • Output 7: Better understanding of ETS regulation and compliance • Output 8: Enhanced knowledge of the industry on operational tasks related to ETS • Output 9: Online training software delivered for industrial enterprises			• Output 4: Enhanced knowledge & engagement on ETS of experts following their participation in annual ETS expert workshops. Due to the irregular pace of the project (see EQ 2.3), the ETS expert workshops were not annual, but rather concentrated in the 2020-2021 period. • Output 5: Joint research papers of Chinese and European experts created. Professor Duan Maosheng from Tsinghua University coordinated the JR component and the preparation of JR papers submitted by each JR group to the Chinese government (a list of the JR outputs was shared with the evaluators). • Output 6: On-the-job experience gained is transferable to the administration at both central and local level. This output was ultimately dropped because of the impossibility of undertaking international exchanges due to COVID-19. • Output 7: Better understanding of ETS regulation and compliance. Over 90% of trainees provided positive feedback about the training received. The qualitative interviews carried out by the evaluation confirm the very high level of satisfaction with the training by trainees. • Output 8: Enhanced knowledge of the industry on operational tasks related to ETS. The figures used are the same as for Output 7. • Output 9: Online training software delivered for industrial enterprises. The project team reported that this output was recently cancelled and the according budget will not be spent. The main reason for the cancellation is that the national ETS rules were only released in late 2020, leaving not enough time to properly procure and deliver the training software and test it on the ground. Therefore, in agreement with DG CLIMA, the output has been dropped.
3.2 What were the main factors influencing the delivery or not of planned outputs?	N/A – there is no judgement involved here. The EQ is merely exploratory.	Qualitative feedback from involved stakeholders on key factors	See EQ 3.4.
3.3 To what extent has the programme achieved its intended outcomes? 4. The political dialogue between China and the	There is evidence of the contribution of the programme to the achievement of its intended outcomes.	• Qualitative feedback from involved stakeholders on achievements • Logframe outcome indicators	• Outcome 1: To contribute to strengthening the political dialogue between China and the EU on the development of ETS. Interviews show evidence that the political dialogue between the EU and China has been strengthened during the period of the project. The MEE confirmed it is very satisfied with the EU-China policy dialogue on ETS that the project supported. Likewise,

Question	Judgement criteria	Indicators	Answers
EU on the development of ETS is strengthened and research exchanges between the EU and China on ETS are promoted. 5. Capacities on emission trading on the side of the Chinese government authorities and the industries involved are significantly strengthened. 6. The familiarity of Chinese industry representatives to handle day-to-day actions required under an emission trading system is sufficiently enhanced			interviewees from DG CLIMA confirmed that the project has been very successful in positively sustaining the bilateral political dialogue on ETS. • Outcome 2: To support China in building and operating an effective ETS through the consolidation of an active network of experts. MEE stressed how they believe the project "played a very important role" in building the capacity of local authorities on the ETS. They mentioned they were very pleased with the ability to respond to their need for large-scale training in 2019 and they emphasised the added value of this project of covering all Chinese provinces. The same is true for local authorities' trainees interviewed, who, during the evaluation, consistently claimed that they now felt confident to both explain the importance of the ETS and to support its operations. At the central level, there is evidence that the project team was respected by the MEE's Climate Change Department (CCD) staff and helped strengthen their capacity on technical matters related to the ETS. There is also some evidence showing how this relationship has been intensifying. Many interviewees believe that the project contributed to integrate elements "borrowed" from the EU ETS, but recalibrated to meet the Chinese context. Examples regularly cited were the MRV guidelines and allowance allocation mechanisms (benchmarking). • Outcome 3: To enable most industrial enterprises to be covered by national ETS participate in market with stronger willingness and capacity. The MEE expressed its satisfaction with the design and implementation of the training events targeting local industry representatives. They appreciated that they covered both policy areas as well as the day-to-day operations linked with the ETS functioning, including helpful practical exercises. The interviewees from the private sector (Chinese energy companies and emission exchanges) consistently confirmed that after the training they felt confident to explain the importance and the functioning of the CN ETS. Moreover, when asked if they would be able to operate confidently on the ETS, all interviewees positively answered.
3.4 What were the main constraints and opportunities that influenced the degree of achievement of the programme outcomes?	The programme was a key contributor to the achievement of intended outcomes.	Qualitative feedback from involved stakeholders on constraints and opportunities	• External factors influencing the EU-China political dialogue on ETS (Outcome 1): ○ During project implementation, leaderships at the helms of both the European Commission and the NDRC / MEE changed. Especially, in late 2017, the Director in charge of the ETS at the NDRC (later to be moved

Question	Judgement criteria	Indicators	Answers
			to the MEE) changed. Although these changes implied some revisions of original work plan, in particular concerning the preference of direct training in spite of ToT, the political dialogue between the EU and China did not seem to have suffered by such change in political leadership. The reason can be found in the fact that a well-working Chinese ETS is a mutual interest. ○ The launch of the European Green Deal on the one hand, and the Chinese announcement about the 2060 carbon neutrality target on the other hand strengthened mutual interests in supporting a strong Chinese ETS even more. ○ In terms of key barriers to the promotion of the political dialogue, the transfer of climate change responsibilities to the MEE and COVID-19 appear to have been the main ones. • External factors influencing capacity building (Outcomes 2 and 3) ○ The government's restructuring was definitely the main external factor that influenced the project implementation. The restructuring slowed down the ability by the project to identify the local trainees and their training needs, as the some of the key stakeholders' roles and responsibilities about ETS changed. In addition, as discussed above, the shift in climate change responsibilities created a massive capacity gap in local and regional EPBs. Ultimately, the evidence shows that the direct training format was conducive to the good outcome achieved in strengthening the capacity of local authorities nationwide, irrespective of the fact that a successful ToT approach is thought to be more effective in the longer term. ○ In terms of COVID-19, the public health crisis appears to have only halted the capacity building activities during the first half of 2020, but the successful containment of the pandemic in China allowed the programme to accelerate the training subsequently.
3.5 Were there additional outputs and/or unintended outcomes obtained by the programme that	The programme management has been appropriately designed to identify, address /	Qualitative feedback from involved stakeholders on additional / unintended results	• No specific additional outputs or outcomes have been identified by the evaluation.

Question	Judgement criteria	Indicators	Answers
were not planned in the project design?	capitalise from, and learn from unintended outcomes		• The large-scale training in 2019 can be considered to a good extent an unexpected outcome of the project, as the request for it arrived at a very short notice and it implied substantial restructuring in the project budget.
3.6 Were there geographic differences in the effectiveness of the project to build ETS capacity? If so, what were the key enablers and barriers that determined such differences?	The programme has been able to strengthen the capacity of ETS stakeholders throughout China and to address local differences in capacity needs.	Qualitative feedback from involved stakeholders on geographic inconsistencies	• The evaluation interviews probed if geographical origins influenced the effectiveness of training events. The evidence collected shows that, as expected, trainees from those cities which were part of ETS pilot schemes generally felt more confident in understanding and operating in a national ETS. This is also true for power sector companies, which were the main operating companies in pilot ETSs and are the first ones to be included in the national ETS.
3.7 Have the behavioural patterns changed in the beneficiary organisations and groups at various levels, and how far have the changed institutional arrangements and characteristics resulted in the planned improvements?	The programme has clearly contributed to the adoption and implementation of new knowledge by its key target groups	• Qualitative feedback from involved stakeholders on behavioural change • Logframe outcome indicators	See EQs 3.3 concerning the improvement in capacity of targeted organisation and EQ 4 in terms of adoption of EU ETS and international best practices by Chinese stakeholders.
3.8 What was the impact to the project relevance and effectiveness of the change of responsibilities on CN ETS between NDRC and MEE?	The programme has shown the required resilience to deal with this change	Qualitative feedback from involved stakeholders on impact of the administrative change	See EQs 3.3 and 3.4.

EQ4 – Achievement of wider effects (Impact):

Question	Judgement criteria	Indicators	Answers
7. **What evidence is there that the programme has contributed to its intended impact?**			
4.1 Considering the situation at the beginning and at the end of the programme, to what extent it contributed to enhance cooperation with China on climate change by continuing to support China in building up a nationwide ETS as a means to reduce its GHG emissions?	There is clear evidence that the programme has contributed to enhancing EU-China cooperation on climate change and ETS.	• Qualitative feedback from involved stakeholders on the programme contribution to its intended impact • Logframe outcome and impact indicators	• Positive impact on maintaining a regular policy dialogue on relevant issues of the national ETS. • The Programme strengthened the EU-China cooperation as strategic partners in climate change. As for climate change mitigation until 2060, the ETS has become one of the top of priorities in China.

Question	Judgement criteria	Indicators	Answers
			• European and Chinese experts undertook joint research and providing policy recommendations for MEE on critical issues relating to the transition from regional pilots to the national ETS (JR-1 and JR-2). • The recommendations provided by the project team found their way only into the draft of MEE's regulations, unfortunately not in its final version. JR3 results (iron and steel, chemicals and pulp and paper) have not been released yet.
4.2 Were new institutional/governance or management practices on ETS applied on the side of China during the time of the project? Had the project a direct influence on those?	The programme directly contributed to the creation and implementation of new institutional/governance or management practices on ETS applied on the side of China.	• Qualitative feedback from involved stakeholders on new practices in the CN ETS • Logframe outcome and impact indicators	• The project contributed to integrate elements "borrowed" from the EU ETS, but recalibrated to meet the Chinese context (MRV guidelines and allowance allocation mechanisms (benchmarking). • Both EU and Chinese researchers mentioned how they worked well with central and local authorities (e.g. environmental exchanges from ETS pilot cities) and how JR activities were effective in clarifying: o how the EU ETS worked (e.g. benchmarking for iron and steel and chemicals sectors); o the rational behind the evolution of technical methodologies and regulations.
4.3 Has the programme been able to promote EU and/or international standards and regulations relating to the climate sector and ETS?	There is evidence that the programme has supported the knowledge transfer and, ideally, adoption of EU and/or international standards and regulations relating to the climate sector and ETS.	• Qualitative feedback from involved stakeholders on the acceptance and use of EU / international standards in the climate sector and ETS in China • Logframe outcome and impact indicators	• All activities were designed to share and promote EU best practices, share the latest version of its regulations and the EU ETS MRV System referring back to international standards.

EQ5 – Likely continuation of achieved results (Sustainability):

Question	Judgement criteria	Indicators	Answers
8. **What is the likelihood that the outcomes will be sustained after the end of the programme's funding period?**			
5.1 To what extent has the programme built the basis for its benefits to continue after its end?	The programme's results (fostered of political dialogue between EU-	• Qualitative feedback from involved stakeholders on	• The EU-China ETS project team and the EU programme representatives agreed on a No-Cost Extension work plan until June 2021.

Question	Judgement criteria	Indicators	Answers
	China, built ETS capacity) are likely to stay and continue to produce benefits even after the end of the programme	likelihood of sustainable outcomes • Logframe outcome and impact indicators	• A second phase of the Platform for Policy Dialogue and Cooperation between EU and China on Emissions Trading is planned for autumn 2021-2023. • There are various ETS issues to be worked on during China's 14th Five-Year Plan (2021-25) and need for a sustained political dialogue: (a) roll-out of the ETS to other economic sectors and other GHGs, (b) evolvement to a real cap-and-trade system with absolute emission restrictions goals. • Joint research activities are likely to be sustained in the future (topics see above). The technical trainees of the EU-China ETS programme seem to be able to maintain their capacities to operate a nationwide emissions trading system and capacities of the Chinese industry and industry association representatives seem to be sustained to handle day-to-day actions.
5.2 What are the major factors influencing the potential sustainability of the programme?	The programme has put in place a resilient sustainability strategy that is able to withstand external changes and barriers	Qualitative feedback from involved stakeholders on key factors and solutions implemented to build a resilient sustainability strategy	• Flexibility of the programme. • Sustained abilities of the researchers and trainers. • Need for capacity building and political dialogue due to the requirements of the roll-out of the national ETS (more sectors, more GHGs).
5.3 What key lessons can be learnt to the benefit of future EU actions in support of the CN ETS (e.g. EU-China Policy Dialogue on ETS II)? And to the benefits of other existing initiatives?	The programme has generated relevant lessons to the benefit of future EU actions in support of the CN ETS and other existing initiatives.	Qualitative feedback from involved stakeholders on lessons learnt	• The roll-out of the national ETS will induce a huge additional demand for well-trained ETS experts from industry to handle the day-to-day business of the domestic ETS. • At least long-term, this additional demand could be satisfied more efficiently through a ToT approach.
5.4 How likely are the results of the joint research projects to be sustained after the end of the programme?	The programme has put in place mechanisms to have strong considerations about sustainability built into the joint research governance and projects	Qualitative feedback from involved stakeholders on sustainability of the joint research programme and results	• Joint research activities are likely to be sustained in the future (topics of the 14th Five-Year Plan, roll-out of the national ETS etc.). • The recommendations provided by the project team found their way only into the draft of MEE's regulations, unfortunately not in its final version. JR3 results (iron and steel, chemicals and pulp and paper) have not been released yet.
5.5 Is there evidence showing the Chinese Emission Trading Trainers (ETTs) are capable of enhancing the capacity of Chinese ETS stakeholders	There is evidence that the programme has selected and trained the right ETTs to promote the scaling up of ETS capacity within China at	• Qualitative feedback from involved stakeholders on sustainability of the training of trainers and capacity building results	• As there largely was direct training rather than training the trainers, this question only partly applies. • Local authorities' trainees interviewed consistently claimed that, because of the training, they feel confident to both explain the importance of the ETS and to support its operations.

Question	Judgement criteria	Indicators	Answers
without the programme's support?	an appropriate scale and depth for the correct functioning of the CN ETS.	• Logframe outcome and impact indicators	• Substantial difference in knowledge of the climate change topic and ETS in officials who took the training compared to those who did not. • At the central level, there is evidence that the project team was respected by CCD staff and helped strengthen their capacity on technical matters related to the ETS.

EQ6 – EU Value Added:

Question	Judgement criteria	Indicators	Answers
9. **What additional value has the programme provided compared to similar actions carried out by EU Member States?**			
6.1 What additional value have been brought by the specific features of this programme as opposed to one carried out by single EU Member States directly?	EU advantage in climate change and ETS policy and dialogue.	Qualitative feedback from involved stakeholders on EU advantages	• The EU Value Added is particularly evident in this project and it is mainly related to: ○ The clear value from learning from the EU ETS; ○ The size of the EU compared to single Member States; ○ The availability of a larger pool of ETS experts and expertise; ○ The centrality of the European Commission in the EU climate diplomacy; ○ The high political relevance of this project for both the EU and China in the context of broader international relations.
6.2 What additional value has been brought by the specific features of this programme in comparison to other initiatives in support of the CN ETS?	Comparison of this programme's outcomes with some projects funded by other donors.	Qualitative feedback from involved stakeholders on added value of this programme compared to others	• The evaluation underscored some treats of this EU-funded project that added value compared to initiatives funded by other donors: ○ There seem to be a basic difference between this project and other projects funded by Multilateral Development Banks (MDBs) (e.g. World Bank, ADB). These institutions tend to run North-to-South type projects, e.g. delivered through direct payments in the form of loans or grants, and the classic consultancy model whereby international experts deliver their support or knowledge to the receiving country. Unlike MDBs, this FPI project is based on a partnership delivery model, involving principles of financial reciprocity, joint research between EU and Chinese researchers, peer-to-peer political dialogue, the use of national trainers. In addition, this approach implied a much higher degree of flexibility and adaptive

Question	Judgement criteria	Indicators	Answers
			management than MDB-funded programmes, which suited very well the demands of the Chinese counterpart. ○ Another key difference from this project and other initiatives funded by MDBs is that the EU is an ETS implementer, so it can provide first-hand ETS experience to China, which changes substantially the credibility of the source of knowledge. ○ When compared to the others, this project has been the only national scale project supporting the ETS in China. ○ This is the only ETS project that involved peer-to-peer joint work between western and Chinese experts.

EQ7 – Coherence of the Action:

Question	Judgement criteria	Indicators	Answers
10. **How coherent and complementary is the programme with other interventions in China in the ETS area?**			
7.1 To what extent is the programme coherent with the EU Green Deal, the EU strategy in China and the EU sectoral approach in ETS / the climate sector?	The programme's objectives and strategy are aligned with EU Green Deal, the EU strategy in China and the EU sectoral approach in ETS / the climate sector.	Qualitative feedback from involved stakeholders on the alignment with EU policies and strategies	• Coherence with the preceding programme in the pilot phase as it covers the evolvement into the start of the implementation phase of the national ETS. • Coherence with the EU policies regarding climate change mitigation including the evolvement of the EU ETS against the background of enhanced GHG emission reduction goals: ○ EU Green Deal and raise of the 2030 greenhouse gas emission reduction target, including emissions and removals, to at least 55% compared to 1990. ○ On 8th China-EU Energy Dialogue, NEA and the European Commission emphasising the significance of clean energy cooperation for the implementation of the Paris Agreement.
7.2 What coherence and complementarities exist with other EU Member State actions in China?	The programme's objectives and strategy are complementary with (or at least do not duplicate efforts of) those	Qualitative feedback from involved stakeholders on coherence and complementarity with other EU Member State actions in China	The Programme is coherent and complementary to other EU-MS initiatives: • German GIZ programme "Capacity building for emissions trading schemes (ETS) in China". • Carbon Pricing Survey funded by Norwegian Embassy in Beijing, Environmental Defence Fund and Energy Foundation China which is

Question	Judgement criteria	Indicators	Answers
	of other EU Member State in China.		implementing the China Carbon Forum; Carbon Market study project funded by the Norwegian government. • The UK government also funded a few projects on ETS in China. After the Brexit, activities ended.
7.3 What coherence and complementarities exist with other initiatives in support of the CN ETS?	The programme's objectives and strategy are complementary with (or at least do not duplicate efforts of) other initiatives in support of the CN ETS	Qualitative feedback from involved stakeholders on coherence and complementarity with other initiatives in support of the CN ETS	The Programme is coherent and complementary to other non-EU initiatives: • World Bank (PMR, PMI): supporting the design of China's ETS by mobilizing international experience and expertise. • Asian Development Bank (ADB): Carbon Market Study Project named "Improving the Design of the National Carbon Emissions Trading System". • Children's Investment Fund Foundation (CIFF): Carbon market capacity building and researches funded by the implemented jointly by EDF (Environmental Defence Fund) China and SinoCarbon.
7.4 How effective was the programme in exchanging knowledge and lessons with other initiatives in support of the CN ETS?	The programme successfully engaged and ideally coordinated its activities and strategy with other initiatives supporting the CN ETS.	Qualitative feedback from involved stakeholders on knowledge exchange and coordination with other initiatives	There was exchange, but no cooperation with other initiatives. The biggest comparative advantages of the EU-China ETS programme against the other programmes are: • The size of the programme. • The implementation of own activities relating to the support of the Chinese ETS rather than direct financing of government activities in China. • The EU as the implementer of the EU ETS has a huge credibility to effectively support the Chinese ETS development.

EQ8 – Cross-Cutting Issues:

Question	Judgement criteria	Indicators	Answers
11. **To what extent has the programme considered and successfully contributed to cross-cutting issues, such as gender, social inclusion and the Sustainable Development Goals (SDGs), and adhere to the principle of Leave No-One Behind and the rights-based approach methodology?**			
8.1 To what extent has the programme team appropriately considered gender and social inclusion (GESI) in the programme design and strategy (e.g. through a gender analysis)?	The programme team appropriately considered gender and social inclusion (GESI) in the programme design and strategy (e.g. through a gender analysis).	• Qualitative feedback from involved stakeholders on the inclusion of GESI in the programme strategy • Existence of a gender analysis / strategy	• Gender equality and social inclusion (GESI) was not taken into consideration in the project design by either the EU or the project contractors, and it played a very limited role in the project implementation. • Nevertheless, interviews with ICF highlighted how the project team is conscious of the importance of the topic and the need to do more about it. ICF

Question	Judgement criteria	Indicators	Answers
			showed a broad understanding of the GESI concept in general, and in the specific about the project.
8.2 How were GESI considerations integrated in the programme implementation?	The programme has effectively implemented its GESI strategy, or in the absence of it, it has actively pursued GESI principles (e.g. equitable opportunities for gender, minority, religious, disability and other groups).	• Qualitative feedback from involved stakeholders on the inclusion of GESI in the programme strategy • Existence of GESI-inclusive activities and outputs	• The evaluation found evidence that the PT has actively discussed and considered GESI mainstreaming in the project. Indeed, ICF Consulting provided a number of examples in which they showed attempting to mainstream GESI considerations in this and especially other projects, for instance by trying to give public visibility to the high profile of EU and Chinese women at both technical and political levels. • The key examples brought up about this project are the organisation of a panel discussion, which was the first all-female panel discussion on the ETS (although the moderator was a male), and the visibility given to female leaders and researchers during respectively the Political Dialogue and the JR groups. The PT remarked that through leading by examples, stereotypes in generally male-dominated sectors such as the ETS and its covered industrial sectors can be proven wrong and broken in the long-term.
8.3 To what extent was the level of integration of GESI in the programme implementation appropriate to the characteristics of the Action (i.e. ETS, climate change mitigation)?	Considering the characteristics of the programme, the level of GESI in the implementation has been appropriate.	• Qualitative feedback from involved stakeholders on the appropriateness of GESI inclusion • Comparison with other ETS supporting initiatives	• Based on all the evidence gathered, it is the view of the evaluators to assess the EU-China ETS project somewhere in between the Level 0 – Non-compliance and Level 1 – Minimum compliance on the GESI mainstreaming scale presented in Figure 7. This is because the connection between the project and the different needs and impacts for women and marginalised groups has only been understood by the PT, and, even so, there is only marginal examples showing how these needs and impacts have been addressed by the project.
8.4 To what extent did the programme identify relevant SDGs, and appropriately and explicitly devised its strategy to contribute to their achievement?	The programme is consistent with China's efforts towards the achievement of SDGs	• Qualitative feedback from involved stakeholders on programme's contribution to SDGs in China • Existence of SDG complementarity analysis / strategy	• In reference to the SDGs, there is direct a link between the programme and SDGs 13 (Climate Action) and 7 (Sustainable Energy). The PT clearly showed that they understand these links as they explicitly refer to the SDGs and the Paris Agreement in the training material prepared.
8.5 To what extent did the programme adhere appropriately and explicitly to the principle of Leave No-One Behind and the	The programme adhered appropriately and explicitly to the principle of Leave No-One Behind	Qualitative feedback from involved stakeholders on the adherence to the principle of Leave No-One Behind and	• ICF showed a broad understanding of the GESI concept in general, and in the specific about the project. In general, the project team went beyond the average connection of GESI with gender balance. They explained that as the ETS is aiming to foster a nationwide transition towards clean energy in China

Question	Judgement criteria	Indicators	Answers
rights-based approach methodology?	and the rights-based approach methodology, consistent with the characteristics of the programme (i.e. ETS, climate change mitigation). As a minimum, there is evidence that the programme has not led to the violation of those principles.	the rights-based approach methodology	by pricing carbon emissions, the project has an obligation to promote and share the understanding of how the energy sector must be more just and leave no one behind, for instance by reducing its reliance on coal mining operations, which involve dangerous working conditions and documented violations of human rights. Indeed, it is important to recognise that ultimate goal of the EU's climate change action (including external actions like this project) is not only to promote a low-carbon transition, but at the same time a *just transition*.