



China

China ETS Pilots, Carbon Markets

Good practice summary

[Results/insights]

Seven ETS Pilot schemes were successfully implemented across different cities/provinces in China in order to pave the way for a domestic ETS system. The pilot cities/provinces are different in terms of economic structure and development, the corresponding MRV systems reflect the specific needs of each pilot ETS. This good practice case study focuses on the pilots and lessons learned from the design and implementation of pilot phase and how these contributed to rules and procedures for the national system.

Scope covered

Functions

Measuring Reporting Verification Accounting

Administrative scope

National Regional City-level Policy/programme/project Corporate/Facility-level

Legal basis

[policies, regulations and commitments that the case study has to comply with]

Chinese 12th Five-Year Plan (2011–2015).¹ The National Development and Reform Commission² (NDRC) The Chinese government announced its intent to establish a national carbon trading system by 2015. As a first step, the National Development and Reform Commission (NDRC) initiated carbon trading pilots in seven provinces and cities.

Chinese 13th five-year plan (2016–2020)^{3,4}: Roadmap for China's development from 2016 to 2020, building on progress made from the 12th five-year plan, that lays out targets and measures to address environmental issues such as climate change, air pollution, water, urbanization, transportation, among others.

2014 NDRC, Provisional measures for the administration of carbon emission rights trading⁵. (the Provisional Measures). These set out the basic regulations that will govern the nationwide emissions trading scheme that is now expected to be launched in 2016.

NDRC are currently proposing a high-level regulation from the state council.⁶ This will authorise the DRC to implement the policy and obtain resource from the financial department, with a legal basis at government level financial resource can be obtained to set up a market based system at the national level. NDRC and DRC will benefit from this law in regard to finance to fuel the market, capacity building, verification and the publishing of companies which do not comply.

Operational since

2011

¹<http://www.britishchamber.cn/content/chinas-twelfth-five-year-plan-2011-2015-full-english-version>

²<http://en.ndrc.gov.cn/>

³http://news.xinhuanet.com/politics/2016lh/2016-03/17/c_1118366322.html

⁴<http://www.wri.org/blog/2016/03/5-questions-what-does-chinas-new-five-year-plan-mean-climate-action>

⁵The full Chinese text of the Provisional Measures is available at: http://qhs.ndrc.gov.cn/zcfg/201412/t20141212_652007.html

⁶No document is available at present. The information was received from Zhibin Chen at SinoCarbon during an interview held by phone on April 26 2016.



How is this related to accounting?

[The following is based solely on the consultant's opinion]

» What kind of measures, policies, or commitments are a) monitored and included in an accounting system, b) only monitored, but not included in an accounting system, or c) not even monitored?

Currently (May 2016) there is no linkage between the national inventory system and the national ETS MRV system so tracking progress from the pilot systems against national emission reduction targets through the GHG inventory would currently not be feasible. A Chinese consultancy⁷ is currently working on a project to promote the integration of GHG management systems for companies and governments, which can link the data together. The current focus is on designing an effective MRV system for the national ETS. Approaches linking the ETS data and then national GHG inventory system are planned to be implemented in the future.

If China were to set a national target for the scope covered by the ETS system, the aggregated ETS data could be used directly to track progress towards the target on an annual basis.

Case description

Background

» What was the need, pre-conditions, and/or experiences that motivated the country to develop this system?

China's economic growth has brought with it a massive increase in GHG emissions which can largely be attributed to China's carbon intensive economy and high energy intensity per unit of Gross Domestic Product (GDP), largely due to the dominance of coal in China's energy supply.

China has an ambitious domestic emission reduction policy aiming to achieve significant emissions reductions⁸. Its policy roadmap has included energy intensity targets for more than a decade, with detailed breakdowns for different sectors and industries. These intensity targets allow continued economic growth, while addressing energy consumption and emissions.

On 30 June 2015, China submitted its Intended Nationally Determined Contribution (INDC), including the target to peak CO₂ emissions by 2030 at the latest, lower the carbon intensity of GDP by 60% to 65% below 2005 levels by 2030, increase the share of non-fossil energy carriers of the total primary energy supply to around 20% by that time, and increase its forest stock volume by 4.5 billion cubic metres, compared to 2005 levels.⁹

ETS's are well known as a mitigation measure well suited for energy intensive sectors and was thus considered as interesting option for China. When the Chinese government intends to implement a new policy, they favour conducting pilot trials in advance of implementing the policy at a national level. In October 2011, the NDRC published a Notice that assigned the task of establishing the ETS pilot programs to five cities (Beijing, Chongqing, Shanghai, Shenzhen and Tianjin) and two provinces (Guangdong and Hubei). The objective of the 7 ETS pilots in China were to evaluate the policy measures across a range of sectors, economies and emissions profiles lessons learned from each of the pilots are being used to inform a national ETS system. The aim of this robust testing system is the continuous improvement of each of the policy measures prior to implementation.

⁷A Chinese low carbon and green development consultancy, working on government programs <http://www.sinocarbon-edu.com/english/>

⁸<http://ebooks.cambridge.org/ebook.jsf?bid=CBO9781316162262> accounting for Carbon

⁹<http://www4.unfccc.int/submissions/INDC/Submission%20Pages/submissions.aspx>

General description of the system

[Questions below should be answered only when applicable]

- » General definition/description of the system
- » What are the main types of action that mitigate GHG emissions?
- » What linkages to other systems/ system elements of environmental information (including adaptation to climate change or emissions trading schemes) do exist and why were they established? What linkages exist to other statistical/ monitoring systems?
- » Which platforms are used to transport information and are they specific to the purpose of usage MRV information?

The seven pilot cap-and-trade schemes are located in five cities and two provinces (Guangdong, one of the manufacturing hubs of China, and Hubei, one of the hubs for the car industry in China).

The seven pilot schemes represent a relatively large geographic distribution cover geographic area exceeding 481 thousand Km² (5% of China's total land mass), with a population of over 260 million people (around 19% of China's population) and GDP of almost 1.8 trillion dollars in 2010 (33% of China's GDP) while covering 20% of China's energy use and 16% of China's carbon dioxide emissions.¹⁰¹¹

The seven pilots each started their operations between June 2013 and June 2014 and have by now developed systems for (1) setting carbon emissions caps for relevant emitters; (2) allocating emissions allowances; (3) monitoring, reporting, and verifying emissions; (4) off-setting allowances with carbon credits; and (5) registering and trading the allowances and offsets. Approaches taken incorporate guidelines regulating emission exchanges, verification and use of certificates from offset projects published at the national level.¹²

For the purpose of allocation of certificates, historic emissions were reported and verified. Detailed information about monitoring, reporting and verification requirements in the pilots is described in the subsection on MRV and accounting processes and procedures.



Figure 1: Map showing geographical location of the 7 ETS Pilots.

Source: Accounting for Carbon

Threshold and Coverage

All seven pilot schemes cover both direct and indirect GHG emissions (e.g. emissions resulting from power consumption). Indirect emissions account for a large share of total emissions covered. Provisions to avoid double counting from the Provisions to avoid double counting

¹⁰<http://www.agi.or.jp/workingpapers/WP2016-01.pdf>

¹¹http://globalchange.mit.edu/files/document/MITJPSPGC_Reprint_14-22.pdf

¹²Valentin Bellassen and Nicolas Stephan (eds.) (2015). Accounting for Carbon. Cambridge: Cambridge University Press.

from the reporting of both direct and indirect emissions have been set up for all pilots. The seven pilots also all include the following sectors: heat and electricity production, iron and steel, nonferrous metals, petrochemicals and chemicals, paper, cement.¹³

Further sectors covered as well as thresholds for emitters to be included in the ETS pilots differ, as the seven pilot cities/provinces are different in terms of economic structure and development. For example, Shenzhen is the only pilot covering buildings as such. Buildings with area exceeding a specified threshold need to report to the competent authority. Beijing and Guangdong pilot exclude mobile sources. Regarding indirect emissions, all of the pilots account for CO₂ emissions from electricity consumption, but only Shanghai, Tianjin, Shenzhen and Guangdong consider heat consumption.

Some of the pilots (Beijing, Shanghai, Shenzhen and Guangdong) set a two-level threshold for determining covered entities, this consists of a reporting only threshold and a compliance threshold which requires emitters to report emission and submit commensurate allowances respectively. Emission threshold may be based on GHG emission, energy consumption or both of the two. Tianjin, Shanghai and Shenzhen stipulate the threshold with GHG emissions, while Hubei uses energy consumption. In the Beijing and Guangdong pilots, if either GHG emission or energy consumption threshold is triggered, the enterprises need to report to the competent authority. In an effort to strengthen reporting capabilities across both covered and non-covered sectors, uncovered enterprises with emissions that exceed thresholds for coverage in some pilots, e.g. Beijing, Shanghai, Guangdong and Shenzhen, are also required to report their emissions each year.

Figure 2 below shows sectors included, thresholds and share of total emissions covered.

Pilots	Covered sectors	Threshold	Covered Entities	Annual cap (million tons)	Covered Emission (%)
Guangdong	Power, cement, iron and steel, ceramic, petrochemical, textile, non-ferrous metals, plastics, and paper	20,000 tons	184	388	50%
Shanghai	Industrial sectors (iron and steel) power, textile, rubber, materials, petrochemical, chemical, non-ferrous metals, etc.)	20,000 tons	191	160	57%
	Non-industrial sectors (airlines, airports, ports, hotels, etc.)	10,000 tons			
Tianjin	Iron and steel, chemical, power, heating, petrochemical and exploitation and those of civil buildings	20,000 tons	114	160	60%
Beijing	Power, heat supply, cement, petrochemical, other industrial sectors, service	10,000 tons	415	78	49%
Shenzhen	Industrial sector (26 sector such as power, manufacturing etc.);	5,000 tons	635	33	54%
	Building	10000/20000 square meters	197		
Hubei	Power, steel, petrochemical, cement, auto production, non-ferrous metals, glass, paper, etc.	60,000 tons	138	324	35%
Chongqing	Iron and steel, power, textile, rubber, etc.	20,000 tons	242	130	35% - 40%

Figure 2: Coverage in seven ETS pilots

Source: Sino Carbon, Huizhi Wang Institute for Economic and Social Research Working Paper Series

¹³http://mp.weixin.qq.com/s?__biz=MjM5NzI5NTc0MQ==&mid=2649887227&idx=1&sn=81afda35d611c866cb33ed798e3caa8c&scene=1&srcid=0514h8qvmBGTct-Wh9RhGILj#wechat_redirect

MRV and accounting systems, processes and procedures

[Questions below should be answered only when applicable]

- » How is information generated, communicated, integrated, and verified at each stage of the MRV chain?
- » What information needs to be gathered in order to quantify the effect of these actions?
- » How is such information gathered or estimated? By whom?
- » How is this information reported? How is it verified?
- » In what areas information is shared among accounting and MRV systems?
- » What kind of agreements are used to establish the relevant institutional roles?

There are large variances in processes and procedures across the seven Pilots, however there are some key similarities and differences across all MRV systems. In the following we present an overview of information available for each of the pilots.¹⁴

Key Similarities and differences of MRV Systems across the ETS pilots Monitoring methodologies

The GHG monitoring methodologies – the basic approaches used to estimate GHG emissions – have several similar features in the seven pilots. For example, companies can choose to quantify their emission via either calculation based (activity data multiplied by emission factor and oxidation factor (if appropriate) or mass balance) or measurement based methods. Only Tianjin and Chongqing allow only calculation-based methods.

Approach to formulating data requirements

The pilots use two approaches for regulating which data has to be monitored and reported. The first one is to stipulate in details about the data source, measurement frequency and measurement standard. This approach is adopted by all pilots except for Shenzhen.

Where this approach is taken fuel consumption reported has to come from energy consumption account or statistics. Beijing and Tianjin pilots require enterprises in the power sector to measure the net calorific value of fuels consumed, while default values can be used for other sectors. For most pilots, carbon content and the oxidation factors can refer to either measured or default values. When accounting indirect emissions, requirements similar in all pilots: activity data may come from receipts or invoices and emission factors are supplied as default values in the guidelines.

The second approach, which is adopted by Shenzhen, sets out different levels (“tiers”) for activity data and emission factors. This approach encourages the use of higher level data with lower uncertainty. When lower level data is used, a statement explaining the reason has to be provided to the competent authority (typically the local DRC, see Figure 5 in the section “institutional structures”).

The Guangdong pilot combines the two approaches. Tiers are set out in the guidelines, as well as the measurement requirements and frequency. Companies are encouraged to use the tiers with high certainty. When measurement of parameters is not possible, default values can be applied.

Apart from emission data, all the pilots require enterprises to report emission related to production and operating activities except for Shenzhen.

Monitoring plan

Monitoring plans are documents setting out what should be measured and how, i.e. the lay down exactly how the monitoring should take place. Not all pilots require the submission of a monitoring plan. Tianjin, Shanghai, Guangdong and Hubei pilots require enterprises to submit a monitoring plan. The plans include general information of the enterprises, methodology choice, parameters monitoring frequency and method. Some of the plans include further requirements as well, for example data management approaches and uncertainties.

Reporting

Reporting takes place using web-based systems in all of the pilots.

¹⁴More information, such as statistical details, coverage and analysis of each pilot can be found at http://www-wds.worldbank.org/external/default/WDSContentServer/WDS/IB/2015/03/24/000333037_20150324141210/Rendered/PDF/951960NWPOPart00Box385315B00PUBLIC0.pdf

Accreditation of verifiers

All the pilots require third party verification of emission reports. The local DRCs funded the historic emission verifications. The competent authorities are in charge of accrediting verifiers. The number of verifiers accredited depends on the demand in each of the pilots. Large number of controlled entities in Beijing, Shanghai and Shenzhen pilots requires more verifiers to successfully complete the task in a short period.

The process of accrediting verifiers and matching verifiers with companies are quite different in pilots. Beijing and Guangdong select verifiers openly and put them on record. Verifiers are appointed to the companies by the designated competent authority (identified by DRC) in the first two years. From the third year on, companies can freely choose verifiers as long as it is in the authority's record list. In Shenzhen and Shanghai, verifiers are accredited the same way in Beijing and Guangdong, but companies are free to choose verifiers from year one in Shenzhen and the service of verification is appointed to the verifiers through governmental procurement, whereas Tianjin incorporates the accreditation of verifiers into the procurement process where bidding participants must meet the requirements set out in the tendering information.

Verification procedure and report

In all pilots the verification process can be grouped in three stages: preparation stage, implementation stage and reporting stage. In the first stage, verifiers sign a contract with enterprise, set up a verification team and make a verification plan. During the implementation stage, the verifier conducts a document review and a field visit. In the final stage, the verification report will be prepared, go through internal technical review and finally be submitted to the competent authority.

Four pilots have laid down requirements related to contents of the verification report. Beijing requires verifiers to report assumptions, equipment calibration and other information in conformity with its monitoring and reporting guidelines. The Shenzhen pilot focuses on the reporting of emission data, verification methods and procedures and the status of the non-compliance (if applicable). Guangdong requires a long list of items, among which the emission figures, emission sources and evidence (e.g. invoices). Hubei pilot focuses on the implementation of the monitoring plan, demonstrating the status of the verification, the implementation status of the monitoring plan, emission calculation and results.

Non-compliance and penalties

Non-compliance as defined under the various pilots can be grouped into three categories: Firstly fraudulence, concealment and refusal to report; secondly obstruction of verification; thirdly verifiers providing fraudulent information or revealing confidential information. Shanghai, Hubei, Guangdong and Shenzhen set out specific penalties for all three types of action, while Tianjin lays down rules for the first and third type and Beijing only stipulate fines for emitters who fail to fulfil reporting obligations. Fines and penalties for the same types of non-compliance differ among the pilots.

Preliminary information on the national ETS

The national ETS is still under development. Below we share information on MRV approaches for the national system as far as available at this point in time.

The system covers the sectors shown in Figure 3 below. In May 2016, the MRV guidelines for the national system have been drafted, by a local consultant, Sino Carbon¹⁵. Full detail of the national system is not yet available in English and the electronic reporting and verification system for the national ETS is under development¹⁶. The system will be web-based system and will allow access to operators for reporting as well as national and local government officials for the assessment of data.

The NDRC will be the lead institution for the MRV system of the National ETS. NDRC will ask the local DRC at province level for a list of individual factories and installations and the associated emissions data. This information will be submitted into the national web-based system once ready. The DRCs at province level will be responsible for organising the verification process of historic emissions for the national system at the province level. The timeline for submitting plans for these to the NDRC is the end of June 2016. Information on historic emissions will be used to set an emission cap for the national ETS.

¹⁵<http://www.sinocarbon-edu.com/english/about/about01.asp>

¹⁶For the purposes of this case study Zhibin Chen (Sino Carbon) was interviewed by phone on 24.04.2016 in order to gain an understanding of the MRV processes under development.

For the operation of the system, the same approach will be used, with DRCs at the province level responsible for the verification process and reporting results to the NDRC.

Sectors	Sub-sectors
Power	power generation
	co-generation of heat and power
	Grid
Petro- chemical	crude oil processing
Chemical	ethane
	synthesis ammonia
	acetylene
	methanol
Non metallics minerals	cement glasses
Non-ferrous metal	steel
Paper - making	Paper pulp
	Paperboard making
Aviation	passenger transportation
	good transportation
	airport
Legal entity with energy consumption above 10,000 tons of tce	

Figure 3. Sectors included in China's national ETS

Source: Updates on Development of China's National ETS, Presentation to the PMR

Design and set-up

[Questions below should be answered only when applicable]

- » How was the system designed?
- » What was the overall process to set-up the system?

In setting up its ETS system, China sought information on establishing necessary legal infrastructure to ensure functioning of the ETS from the EU ETS counterparts, including rules on procedure, buying, selling, auctioning and type of directives and legislation required to operate system. The seven ETS pilots generally are based on provincial and municipal administrative rules as their main legal enforcement, and complemented by some technical standards and implementation regulations.

In the formulation of MRV guidelines, experts from universities, research institutes and consulting firms took part in the design of the MRV guidelines, led by the DRC for each pilot. After the draft versions were finalised, different stakeholders including experts in the enterprises and associations were invited to give feedback. Eventually guidelines were put on the official web based platforms and calls for public opinion were made. The same approach will be followed for the guidelines at the national level.

A presentation given to the PMRV in April 2016, indicated the schedule for the set-up of the national ETS as presented in Figure 4.



Figure 4: Schedule for the development of the national ETS

Source: Updates on Development of China's National ETS, Presentation to the PMRV¹

Improvement over time

» Is there an internal evaluation of the systems established aiming to enable improvement over time?

Lessons from the pilots to be considered for the improved National system¹⁷

- » A robust Legal Frame is the foundation of any ETS system. Beijing and Shenzhen were the only two pilots which have emission laws passed by local congress, these two pilots have the most integrated rules and regulations. The result is that these two pilots have the highest carbon price and most active markets. A robust legal framework will provide the basis of a successful national system.
- » The quality of historical data is significantly important in designing the national system, e.g. for the allocation. Robust MRV approaches are thus important.
- » For an overall improved and robust national system, indirect emissions should be counted to encourage the electricity consumer to reduce their CO₂ emissions. This is because in China the power sector cannot change the selling price of electricity.
- » For an improved national system compared to the pilot trials, there must be focus on large emitters first. It is recommended to start with state own companies and large private companies can reduce the management cost.
- » Industry buy-in is important and the Chinese government are taking steps to improve this via information campaigns.

On-going procedures for continuous improvement in the design and implementation of a national ETS system.

- » A platform has been set up to collect questions and other feedbacks, the feedback will be considered for the improvement of the national ETS over time.
- » Capacities will be increased through trainings for different subjects related to the ETS and different trainees (authorities, companies, verifiers) based on feedback received. Furthermore, EU Capacity building will take place at regional level and EU capacity building.

¹⁷These recommendations were developed by SinoCarbon and communicated to us by Zhibin Chen (Sino Carbon) in the interview on 24.04.2016.

Institutions involved

- » What institutional arrangements allow for the flow and integration of this information?
- » What types of entities take a role in the above structures?

At the level of the pilots ETS's

Lead authorities (“competent authorities”) and relevant organisations are presented in Figure 5 below.

Elements	National	ETS Pilots						
		Beijing	Tianjin	Shanghai	Shenzhen	Chongqing	Guangdong	Hubei
1. Organizational management of MRV program	Competent Authority NDRC- Department of Climate Change	Competent Authority: Local DRC, Relevant organization: financial, fiscal, statistical and other departments	Competent Authority: Local DRC, Relevant organization: Tianjin Financial Affairs Office, Tianjin Securities Regulatory Bureau, Tianjin Legislative Affairs Office, Tianjin Economic and Information Technology Commission, etc.	Competent Authority: Local DRC, Relevant organization: 1. economic information technology, construction and traffic, ports, business, tourism, finance and other relevant departments, participating in determining the coverage of covered entities, the allocation of allowance and so on. 2. The Shanghai Energy Conservation Supervisory Center implements the administrative punishment.	Competent Authority: Local DRC, Relevant organization: 1. market supervision department is responsible for the identification and record of 3rd party agency; 2. fiscal, financial management, housing construction, environmental protection and other relevant functional departments participate in relevant managing activities within their respective responsibilities.	Competent Authority: Local DRC, Relevant organization: Chongqing Financial Affairs Office, Fiscal, Economic and Information, Urban and Rural Construction State-Owned Asset, Aquality Supervision, Pricing Departments.	Competent Authority: Local DRC, Relevant organization: 1. economic information technology, fiscal, housing construction, statistic, finance and other relevant departments implement the carbon emissions trading work according to their responsibilities respectively. 2. The governments in the prefecture-level cities are charge of the carbon emissions trading work in their respective administrative regions.	Competent Authority: Local DRC, Relevant organization: Hubei Economy and Information Technology Administration, Hubei Provincial Department of Supervision, Department of Housing and Urban Rural Development of Hubei Province, Department of Transportation of Hubei Province, State owned Assets Supervision and Administration Commission of Hubei Provincial People's Government, Hubei Administration For Industry & Commerce, etc.

Figure 5: Organisational management for each of the MRV Systems for the China's ETS Pilots.

Source: World Bank PMR.

With regards to the national ETS

Lead: National Development and reform Commission¹⁸ (NDRC)

Institutional arrangements: Data from the covered entities (e.g. installations) will be reported to DRC's at a local level and verified by the identified verification agencies.

Case Learning

Why is it good practice

The robust design and implementation of the 7 pilot trials across China in advance of developing a national ETS policy demonstrate good practice in policy design. The 7 ETS pilots in China provide a robust and methodical approach to evaluate the policy measures and inform the development national ETS system and its associated MRV procedures.

¹⁸<http://en.ndrc.gov.cn>

Barriers that have been overcome

[barriers that have been overcome till date]

Capacity: Key stakeholders were previously unfamiliar with market based policy. However, capacity building has been put in place utilising experts from EUETS and international institutions and relevant Chinese institutions, departments and domestic technical experts, verifiers and covered entities. To facilitate the accounting and reporting of GHG emissions and the verification process, training for personnel from each of the enterprises as well as the verifiers has been organised by the DRC. The trainers have been sourced from the local think tanks, for example organizations that drafted the accounting, reporting and verification guidelines, as well as experts from abroad who have good experience in implementation of MRV mechanism.

Institutional: Key institutions to facilitate information flows for a national ETS system and associated were not previously in place. The lessons learned during the 7 Pilots has enabled the design of robust institutional structures.

Sociocultural: There has been resistance to tackling climate change at factory level. Capacity building has helped gain the necessary buy-in.

Barriers to overcome

[barriers that are still present and needed to overcome]

Capacity: Further capacity building is required relating to continuous review and improvement.

Transparency of information: Observers from Europe regard a lack of transparency to be one of the most pressing problems of the emerging Chinese ETS. Compared to the EU ETS, the amount of publicly available information is relatively low. Emitters are very sensitive about sharing production data fearing disclosure of valuable information to their competitors this often outweighs the issue of having no visibility of participating emitters and the overall compliance rate during the compliance cycle. There are currently no plans to make the data publically available.

Sociocultural/ Political: In an economy that is still heavily regulated, costs cannot be passed on easily and market distortions are abundant. The electricity price for example is set by the Chinese state, and forces (state-owned) utilities to operate at a loss if coal prices rise above a certain threshold. It is therefore possible that Beijing will hold back on the implementation of a nation-wide ETS until certain market reforms have been realized, such as a liberalization of the power sector, which would make carbon pricing in general easier, as costs could be imposed on generation and then passed down.

Quantitative information

Funding obtained

The 7 Pilots are funded with national funds.

The Programme for Market Readiness (PMR) awarded \$8 million in funding China in 2013, this funding is used for research design of the national emissions trading system.¹⁹

¹⁹See <https://www.thepmr.org/country/china-0>

The GIZ project “Capacity Building for the design of a technical and institutional infrastructure to reach the 2020-targets (GHG-Monitoring)” supports both the pilots and national level MRV activities with capacity building.²⁰

EU Capacity building took place at regional level in 2015 under the prosperity fund programme²¹.

Funding required

Confidential

Staff

[Number of staff involved in the design and implementation of the case study]

It is estimated that the number of staff directly involved the set-up of the pilots was around 100-150 from local governments and high-level experts from Singwa University, Beijing

Time

[Time required to get to this stage]

5 years

Further information

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Empowered lives.
Resilient nations.



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Federal Ministry for the
Environment, Nature Conservation,
Building and Nuclear Safety