



**Monitoring report form
(Version 05.1)**

Complete this form in accordance with the Attachment "Instructions for filling out the monitoring report form" at the end of this form.

MONITORING REPORT

Title of the project activity	Songya Hydropower Project	
UNFCCC reference number of the project activity	Ref.3176	
Version number of the monitoring report	Version 1.0	
Completion date of the monitoring report	20/03/2016	
Monitoring period number and duration of this monitoring period	1 st monitoring period from 22/11/2010 to 31/12/2012	
Project participant(s)	Pingli County Xinglong Water & Electricity Development Co., Ltd.	
Host Party	People's Republic of China	
Sectoral scope(s)	Sectoral Scope 1: Energy industries	
Selected methodology(ies)	Methodology: AMS-I.D.: Grid connected renewable electricity generation---Version 13.0	
Selected standardized baseline(s)	NA	
Estimated amount of GHG emission reductions or net GHG removals by sinks for this monitoring period in the registered PDD	114,283	
Total amount of GHG emission reductions or net GHG removals by sinks achieved in this monitoring period	GHG emission reductions or net GHG removals by sinks reported up to 31 December 2012	GHG emission reductions or net GHG removals by sinks reported from 1 January 2013 onwards
	89,749	0

SECTION A. Description of project activity

A.1. Purpose and general description of project activity

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The purpose of Songya Hydropower Project (hereafter, the project) is to utilize the hydrological resources of Lan River through construction of a run-of-river hydro project to generate zero emission electricity. The electricity generated by the project displaces part of the electricity generated by the Northwest Power Grid (NWPG) which is dominated by coal-fired power plants, and thus greenhouse gas (GHG) emissions are expected to be reduced. The estimated annual GHG emission reductions are 44,235 tCO₂e per year during a seven years renewable crediting period.

The project is a small-scale newly-built run-of-river hydropower station, which is operated by Pingli County Xinglong Water & Electricity Development Co., Ltd. It involves three sets of 5 MW turbine generators and associate generators to generate electric power. The total installed capacity is 15,000 KW. The estimated annual power supply will be 50,775 MWh which will be exported to the Northwest Power Grid of China (hereafter, the Grid or NWPG) through Shaanxi Power Grid.

The construction of the project activity was started on 01/12/2007. The project activity was put into operation on 01/05/2010, and the permission of supplying electricity to Shaanxi Power Grid was issued on 22/11/2010. During the first monitoring period (22/11/2010 -31/12/2012), the total emission reductions achieved is 89,749 tCO₂e.

A.2. Location of project activity

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The project is located in Baxian town of Pingli county, Shaanxi Province of China, on the upper stream of Lan River which is the first branch on the south of Hanjiang River.

The project lies on the upstream of Lan River which is the first branch on the south of Hanjiang River. The Longitude is E 109°05'48" , and the Latitude is N 32°09'13" .



Figure 1: The location of the Shaanxi Province in China

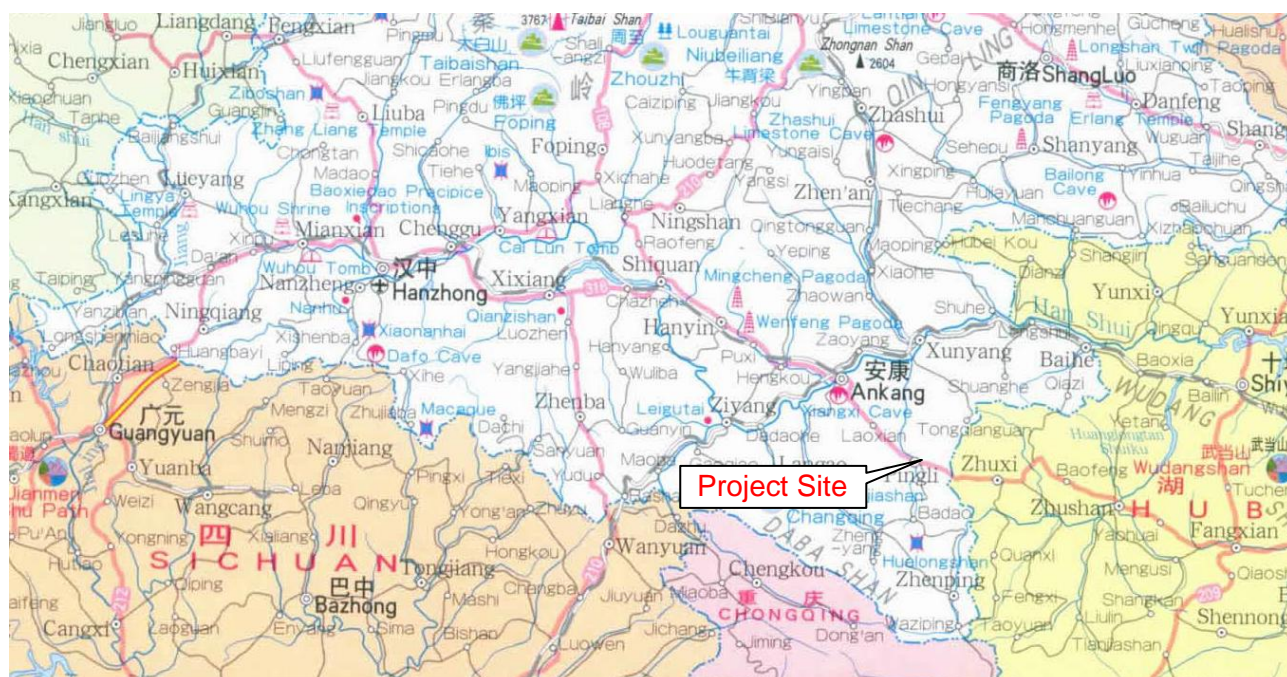


Figure 2 The proposed project activity in Shaanxi Province

A.3. Parties and project participant(s)

Party involved (host) indicates a host Party)	Private and/or public entity(ies) project participants (as applicable)	Indicate whether the Party involved wishes to be considered as project participant (yes/no)
People's Republic of China (host)	Private entity: Pingli County Xinglong Water & Electricity Development Co., Ltd.	No
...	...	

A.4. Reference of applied methodology and standardized baseline

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The project operation has been monitoring in accordance with the requirements of the applicable monitoring methodology as described in PDD and the approved monitoring methodology AMS-I.D. Grid connected renewable electricity generation (version 13).

<http://cdm.unfccc.int/methodologies/DB/W3TINZ7KKWCK7L8WTFQQOFQQH4SBK>

Tool to calculate project or leakage CO2 emissions from fossil fuel combustion

<http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-03-v2.pdf>

Tool to calculate the emission factor for an electricity system

<http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v4.0.pdf>

A.5. Crediting period of project activity

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The renewable crediting period (7 years) is adopted by the project activity, and the first starting date of the crediting period is from 22 Nov. 2010 to 21 Nov. 2017.

A.6. Contact information of responsible persons/entities

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Name of persons/entities: Shenmu Jingyuan Clean Development Co., Ltd.

Address: No. 501, Flat 2, Power Bureau, South Area, Dongxing Street, Shenmu County, Shanxi Province, China

Tel: 0912-8322320

Email: liuzhongqiang8@163.com

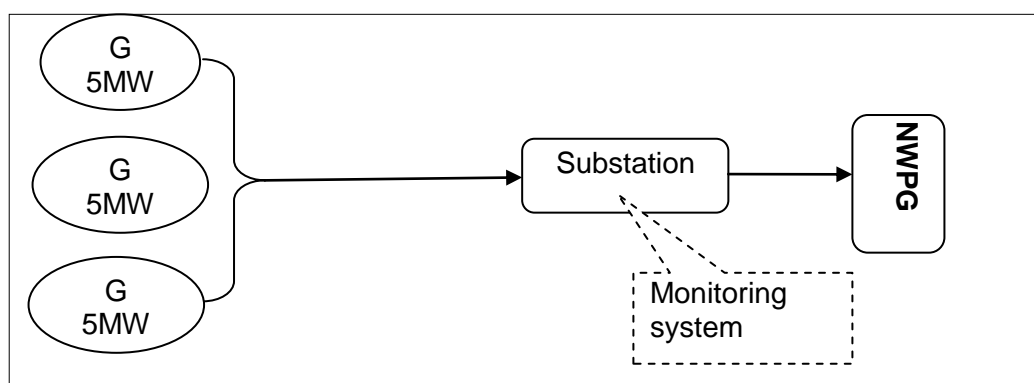
SECTION B. Implementation of project activity**B.1. Description of implemented registered project activity**

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The project activity consists of one site and has been implemented as described in the registered PDD. The project involves the installation of three sets of 5 MW hydro turbine and generator units. The start date of the project activity is 01/12/2007, when the construction permit was issued. The project activity was put into operation on 01/05/2010.

During this monitoring period, the hydro turbine and generator units and the monitoring meters of the project operated normally, no malfunction or replacement of equipments took place. There are no events or situations that occurred during this monitoring, which could impact the applicability of the applied methodology.

The main process of the project activity can be seen in following figure:



The key technical indicators of the turbines and generators of the project are listed in the following table:

Generator	Type	SF5000-8/2600
	Unit	3
	Rated capacity	5000 kW
	Rated power factor	0.80
	Rated revolution	750 r/min
	Rated voltage	6.3 kV
Turbine	Type	HJ JF2503-LJ-92
	Unit	3
	Rated revolution	750.0 r/min
	Maximum water head	95.94 m

	Rated water head	94.63 m
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B.2. Post-registration changes**B.2.1. Temporary deviations from registered monitoring plan, applied methodology or applied standardized baseline**

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N/A

B.2.2. Corrections

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N/A

B.2.3 Changes to start date of crediting period

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The start date of crediting period was changed from 10 June 2010 to 22 Nov. 2010.

B.2.4 Inclusion of a monitoring plan to the registered PDD that was not included at registration

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N/A

B.2.5. Permanent changes from registered monitoring plan, applied methodology or applied standardized baseline

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N/A

B.2.6. Changes to project design of registered project activity

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N/A

B.2.7. Types of changes specific to afforestation or reforestation project activity

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N/A

SECTION C. Description of monitoring system

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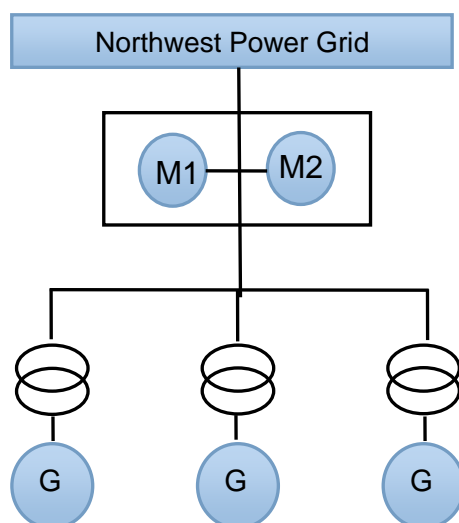
Operational and Management Structure For Monitoring**Data collection procedures**

The electric energy metering system was equipped according to the requirements of the Technical administrative code of electric energy metering (DL/T448-2000).

According to the Methodology AMS-I.D. (ver.13) and given that the emission factor is ex-ante calculated, the data to be monitored is the electricity supplied to and exported from the Grid by the project activity, as well as the net electricity supplied to the grid.

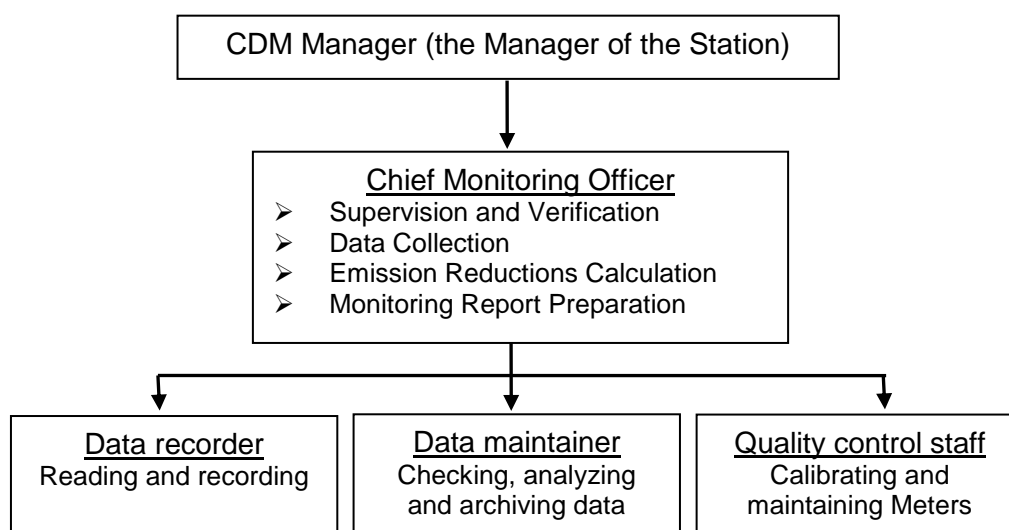
So, bi-directional electricity meters are installed to measure the quantity of electricity from and to the grid by the project activity. Specifically, meter M1(main meter) and M2 (back-up meter)are installed at the project site to measure the electricity supplied to the grid by the project activity and the electricity consumption by the project activity from the grid, which are the main electricity meters for emission reduction calculation.

The line diagram showing meter location is as follows:



Organizational structure, roles and responsibilities

In order to ensure the monitor plan work effectively and efficiently, the project owner established the processing and managing structure. Clear roles and responsibilities will be assigned to the team members. The team generally includes a project manager, data recorders, meter maintainer and quality control personnel (see following Figure).



Calibration and maintenance of the electricity meter

The metering equipment will be configured and checked periodically in compliance with the National Guidelines “Technical administrative code of electric energy metering” (DL/T448-2000). If there are any substantial discrepancies between the meters, the calibration and testing of the meters should be carried out by the certified company. The calibration records will be provided to and maintained by the owner, and readily accessible for DOE.

Data and records management

The site operators are in charge of reading and recording the meters, and the accumulated data on electricity meters are recorded per month and aggregated into monthly report. The monthly report is checked and the emission reductions are calculated by CDM project manager. The electricity sales receipts or invoices are used for crosscheck. All data required for verification and issuance will be kept for at least two years after the end of the crediting period or the last issuance of CERs

of this project, whichever occurs later.

Emergency procedures for the monitoring system

In case the main meter (M1) for monitoring electricity from and to the grid is out of service, calibrated backup meter (M2) is to be used and the data in the malfunction period measured by backup meters are used to calculate the emission reduction. The starting time and the ending time will be recorded carefully; and the report needs to be archived and provided to DOE

During this monitoring period, no emergency situations happened.

SECTION D. Data and parameters

D.1. Data and parameters fixed ex ante or at renewal of crediting period

(Copy this table for each piece of data and parameter)

Data/parameter:	EF_y
Unit	tCO ₂ /MWh
Description	Baseline emission factor of Northwest China Power Grid
Source of data	Calculated according to the procedure outlined in B.6 of the registered PDD.
Value(s) applied)	0.8712
Choice of data or measurement methods and procedures	The data is from the official documents published by China Government
Purpose of data	The data is used for baseline emission calculation.
Additional comments	The data is calculated ex-ante and is fixed during the first crediting period

D.2. Data and parameters monitored

(Copy this table for each piece of data and parameter)

Data/parameter:	$EG_{\text{exported},y}$
Unit	MWh
Description	Electricity supplied by the project activity to the grid in year y
Measured/calculated/default	Measured
Source of data	Meter records
Value(s) of monitored parameter	103,129.4

Monitoring equipment	Bi-directional meter		
	Meter	M1(main meter)	M2(back-up meter)
	Type	DSSD2815	DSSD2815
	Accuracy Class	0.5s	0.5s
	Serial Number	DN003379	DN003380
	Calibration date and validity	Calibration: 20/03/2010 validity: to 19/03/2014; Calibration:16/03/2011 validity: to 15/03/2015; Calibration: 12/03/2012 validity: to 11/03/2016;	
	Calibration Entity	Calibrated by An Kang Electricity Supply Company Energy Metering Center according to the electric energy technical standard.	
Measuring/reading/recording frequency:	Measured continuously and reported on a monthly basis		
Calculation method (if applicable):	The difference of the quantity of the electricity exported and the electricity imported of the main meter M1.		
QA/QC procedures:	Meters will be calibrated periodically according to national standard and the readings will be cross-checked by receipt.		
Purpose of data:	The data is used for baseline emission calculation.		
Additional comments:	N/A		

Data/parameter:	EG <i>imported, y</i>		
Unit	MWh		
Description	Electricity imported by the project activity to the grid in year y		
Measured/calculated/default	Measured		
Source of data	Meter records		
Value(s) of monitored parameter	110.9		
Monitoring equipment	Bi-directional meter		
	Meter	M1(main meter)	M2(back-up meter)
	Type	DSSD2815	DSSD2815
	Accuracy Class	0.5s	0.5s
	Serial Number	DN003379	DN003380
	Calibration date and validity	Calibration: 20/03/2010 validity: to 19/03/2014; Calibration:16/03/2011 validity: to 15/03/2015; Calibration: 12/03/2012 validity: to 11/03/2016;	
	Calibration Entity	Calibrated by An Kang Electricity Supply Company Energy Metering Center according to the electric energy technical standard.technical standard	
Measuring/reading/recording frequency:	Measured continuously and reported on a monthly basis		
Calculation method (if applicable):	The difference of the quantity of the electricity exported and the electricity imported of the main meter M1.		
QA/QC procedures:	Meters will be calibrated periodically according to national standard and the readings will be cross-checked by receipt.		
Purpose of data:	The data is used for baseline emission calculation.		
Additional comments:	N/A		

Data/parameter:	EG_y
Unit	MWh
Description	Net Electricity supplied by the project activity to the grid in year y
Measured/calculated/default	Calculated based on the difference between electricity supplied to the grid ($EG_{exported, y}$) and imported from the grid ($EG_{imported, y}$), which are read by the meter.
Source of data	Meter records
Value(s) of monitored parameter	103,018.5
Monitoring equipment	Bi-directional meter: M1
Measuring/reading/recording frequency:	Measured continuously and reported on a monthly basis
Calculation method (if applicable):	The difference of the quantity of the electricity exported and the electricity imported of the main meter M1.
QA/QC procedures:	Meters will be calibrated periodically according to national standard and the readings will be cross-checked by receipt.
Purpose of data:	The data is used for baseline emission calculation.
Additional comments:	N/A

D.3. Implementation of sampling plan

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N/A

SECTION E. Calculation of emission reductions or GHG removals by sinks

E.1. Calculation of baseline emissions or baseline net GHG removals by sinks

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According to the methodology and registered PDD, the baseline emissions calculation is:

$$BE_y = EG_y \times EF_y$$

$$EG_y = EG_{exported, y} - EG_{imported, y}$$

where:

BE_y is the baseline emissions for the project activity during the monitoring period in tons of CO_2 ,

EG_y is the net electricity supplied to the grid by the project activity during the monitoring period in MWh,

EF_y is the combined baseline emission factor for the project activity determined in the registered PDD of the project ex ante in tons of CO_2 per MWh,

$EG_{exported, y}$ is the electricity exported by the project activity to the grid during the monitoring period in MWh,

$EG_{imported, y}$ is the electricity imported by the project activity from the grid during the monitoring period in MW,

EF_y was calculated ex ante and will not be changed during the first 7-year monitoring period. As per the PDD of the Project the value is 0.8712 t CO_2 e/MWh.

Baseline emissions are calculated with baseline emission factor (EF_y) and the net electricity supplied by the Project to the grid (EG_y), as follows:

$$BE_y = EG_y \times EF_y = (EG_{\text{exported},y} - EG_{\text{imported},y}) \times 0.8712 = 103,018.5 \times 0.8712 = 89,749 \text{ tCO}_2\text{e}$$

E.2. Calculation of project emissions or actual net GHG removals by sinks

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The project is a run-of-river hydropower plant, therefore the project emission should not be considered, e.g. the emissions of the project is zero, $PE_y = 0$.

E.3. Calculation of leakage

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According to AMS-I.D. (ver.13), no leakage is considered because the energy generating equipment is not transferred from another activity and the existing equipment is not transferred to another activity.

$Ly = 0 \text{ tCO}_2\text{e}$.

E.4. Summary of calculation of emission reductions or net GHG removals by sinks

Item	Baseline emissions or baseline net GHG removals by sinks (t CO ₂ e)	Project emissions or actual net GHG removals by sinks (t CO ₂ e)	Leakage (t CO ₂ e)	GHG emission reductions or net GHG removals by sinks (t CO ₂ e) achieved in the monitoring period		
				Up to 31/12/2012	From 01/01/2013	Total amount
Total	89,749	0	0	89,749	0	89,749

E.5. Comparison of actual emission reductions or net GHG removals by sinks with estimates in registered PDD

Item	Values estimated in ex ante calculation of registered PDD	Actual values achieved during this monitoring period
Emission reductions or GHG removals by sinks (t CO ₂ e)	114,283 ¹	89,749

E.6. Remarks on difference from estimated value in registered PDD

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Since the actual value reached during the monitoring period is less than the ex-ante calculation of the registered PDD, no explanation is need according to the monitoring report guideline.

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¹ The annual emission reductions in the registered PDD is 44,235 tCO₂e, hence emission reductions during this monitoring period is calculated as $44235/365 \times 943 = 114,283 \text{ tCO}_2\text{e}$.

Appendix 1. Contact information of project participants and responsible persons/entities

Project participant and/or responsible person/ entity	<input checked="" type="checkbox"/> Project participant <input type="checkbox"/> Person/entity responsible for completing the CDM-MR-FORM
Organization name	Pingli County Xinglong Water & Electricity Development Co., Ltd.
Street/P.O. Box	Wuyaoshan village, Baxian town, Pingli county
Building	
City	Ankang
State/region	Shaanxi
Postcode	725504
Country	People's Republic of China
Telephone	+86-0915-8718828
Fax	+86-0915-8718828
E-mail	
Website	
Contact person	Hao Qiang
Title	Chairman
Salutation	Mr.
Last name	Hao
Middle name	
First name	Qiang
Department	
Mobile	
Direct fax	+86-0915-8718828
Direct tel.	+86-0915-8718828
Personal e-mail	163haoqiang@163.com

Project participant and/or responsible person/ entity	<input type="checkbox"/> Project participant <input checked="" type="checkbox"/> Person/entity responsible for completing the CDM-MR-FORM
Organization name	Shenmu Jingyuan Clean Development Co., Ltd.
Street/P.O. Box	No. 501, Flat 2, Power Bureau, South Area, Dongxing Street, Shenmu County
Building	
City	Yulin
State/region	Shaanxi Province
Postcode	719300
Country	People's Republic of China
Telephone	0912-8322320
Fax	
E-mail	liuzhongqiang8@163.com
Website	
Contact person	Liu Zhongyao
Title	
Salutation	Mr.
Last name	Liu
Middle name	
First name	Zhongyao
Department	
Mobile	86-015319608183
Direct fax	0912-8322320
Direct tel.	0912-8322320
Personal e-mail	liuzhongqiang8@163.com

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Document information

<i>Version</i>	<i>Date</i>	<i>Description</i>
05.1	4 May 2015	Editorial revision to correct version numbering.
05.0	1 April 2015	Revisions to: <ul style="list-style-type: none"> • Include provisions related to delayed submission of a monitoring plan; • Provisions related to the Host Party; • Remove reference to programme of activities; • Overall editorial improvement.
04.0	25 June 2014	Revisions to: <ul style="list-style-type: none"> • Include the Attachment: Instructions for filling out the monitoring report form (these instructions supersede the "Guideline: Completing the monitoring report form" (Version 04.0)); • Include provisions related to standardized baselines; • Add contact information on a responsible person(s)/ entity(ies) for completing the CDM-MR-FORM in A.6 and Appendix 1; • Change the reference number from <i>F-CDM-MR</i> to <i>CDM-MR-FORM</i>; • Editorial improvement.
03.2	5 November 2013	Editorial revision to correct table in page 1.
03.1	2 January 2013	Editorial revision to correct table in section E.5.
03.0	3 December 2012	Revision required to introduce a provision on reporting actual emission reductions or net GHG removals by sinks for the period up to 31 December 2012 and the period from 1 January 2013 onwards (EB70, Annex 11).
02.0	13 March 2012	Revision required to ensure consistency with the "Guidelines for completing the monitoring report form" (EB 66, Annex 20).
01	28 May 2010	EB 54, Annex 34. Initial adoption.
Decision Class: Regulatory Document Type: Form Business Function: Issuance Keywords: monitoring report		