



## Dioxins Reduction from the Pulp and Paper Industry (P125528)

EAST ASIA AND PACIFIC | China | Environment & Natural Resources Global Practice |  
Global Environment Project | Investment Project Financing | FY 2012 | Seq No: 12 | ARCHIVED on 24-Apr-2018 | ISR31426 |

Implementing Agencies: Foreign Economic Cooperation Office of Ministry of Environment Protection, People's Republic of China

### Key Dates

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Bank Approval Date:29-Mar-2012

Effectiveness Date:19-Jun-2012

Planned Mid Term Review Date:11-Dec-2015

Actual Mid-Term Review Date:01-Dec-2015

Original Closing Date:30-Jun-2017

Revised Closing Date:30-Jun-2018

### Global Development Objectives

Global Environmental Objective (from Project Appraisal Document)

The project development objectives are to: (a) demonstrate the result of adoption of best available techniques and best environmental practices (BAT/BEP) in four selected non-wood pulp mills; and (b) support China in developing and adopting a long-term action plan to guide the promotion of a sector-wide BAT/BEP adoption.

Has the Global Environmental Objective been changed since Board Approval of the Project Objective?

No

### Components

Name

BAT/BEP Investment in Participating Mills and Promotion of BAT/BEP in Selected Mills:(Cost \$62.97 M)

National Action Plan for Sector-Wide Replication:(Cost \$4.23 M)

Monitoring and Evaluation:(Cost \$1.30 M)

Project Management:(Cost \$3.66 M)

### Overall Ratings

Name	Previous Rating	Current Rating
Progress towards achievement of PDO	● Moderately Satisfactory	● Moderately Satisfactory
Overall Implementation Progress (IP)	● Moderately Satisfactory	● Moderately Satisfactory
Overall Risk Rating	● Substantial	● Substantial



## Implementation Status and Key Decisions

Since last ISR reporting, final demonstration mill (Linyuan) had completed performance verification. Final tranche of disbursement to all three demonstration mills had been made. NAP completion has been delayed in order to be coordinated with its issuance procedure. Promotion of BAT/BEP in selected mills encountered difficulties which was discussed intensively during the recent mission. The client has proposed to extend the project which is now being reviewed by the Bank.

## Risks

### Systematic Operations Risk-rating Tool

Risk Category	Rating at Approval	Previous Rating	Current Rating
Political and Governance	--	● Low	● Low
Macroeconomic	--	● Low	● Low
Sector Strategies and Policies	--	● Low	● Low
Technical Design of Project or Program	--	● Substantial	● Substantial
Institutional Capacity for Implementation and Sustainability	--	● Moderate	● Moderate
Fiduciary	--	● Low	● Low
Environment and Social	--	● Substantial	● Substantial
Stakeholders	--	● Moderate	● Moderate
Other	--	--	--
Overall	--	● Substantial	● Substantial

## Results

### Global Environmental Objective Indicators

#### ► Reduced UPOPs releases in the four non-wood fiber mills supported by the Project(Text, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	Sichuan Jinfu: 0.078; Hunan Linyuan: 0.113; Henan Baiyun: 0.067; Guangxi Pumiao: 0.126	Sichuan Jinfu: 0.001; Hunan Linyuan: 0.002; Henan Baiyun: 0.015; Guangxi Pumiao: 0.014	Sichuan Jinfu: 0.001; Hunan Linyuan: 0.002; Henan Baiyun: 0.015; Guangxi Pumiao: 0.014	Sichuan Jinfu: 0.023; Hunan Linyuan: 0.034; Henan Baiyun: 0.020; Guangxi Pumiao: 0.036.
Date	31-May-2015	31-Aug-2017	28-Feb-2018	30-Jun-2017

**Comments**

Unit of Measure: g TEQ/a UPOPs released. The values measure the toxic equivalent (TEQ) of the UPOPs released by each mill annually. All remaining mills have completed BAT/BEP investment and final dioxins testing have been completed, which was reported in the last ISR. The client has agreed to restructuring the project, during which the number of 4 and Pumiao may be dropped to take stock of what the project has actually achieved.

► Adoption of a long-term action plan for the sector's UPOPs reduction (Text, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	NAP finalization expected soon.	NAP finalization expected soon.	Issued
Date	30-Jun-2012	31-Aug-2017	28-Feb-2018	30-Jun-2018

**Comments**

The NAP had been substantially completed. In order to be coordinated with its issuance means and procedure, the NAP is being revised. The final NAP is being submitted to the Bank for review.

**Overall Comments****Intermediate Results Indicators**

► Completion of BAT/BEP investment (Number, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	3.00	3.00	4.00
Date	29-Mar-2012	31-Aug-2017	28-Feb-2018	30-Jun-2017

**Comments**

Jinfu, Baiyun and Linyuan completed BAT/BEP investments through 2015-mid 2016. Pumiao completed investments but closed for financial reasons before starting the regular operation. Its investment process itself still provided some demonstration value and is expected to be useful for purposes of developing the NAP. To take stock of what the project has achieved, FECO has agreed to consider revising the number during the proposed project restructuring.



► Numbers of mills to prepare technical and safeguard documents for BAT/BEP investment (Number, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	0.00	0.00	4.00
Date	30-Jun-2016	31-Aug-2017	28-Feb-2018	30-Jun-2018

Comments

**The implementation of the activity has been delayed. The recent mission discussed with FECO intensively on how to proceed this activity.**

► COD discharge per unit of non-wood pulp production from the four mills (Text, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	Sichuan Jinfu: 10.2.Hunan Linyuan: 5.28; Henan Baiyun: 4.73; Guangxi Nanning Pumiao: 13.5.	Sichuan Jinfu: 2.11; Hunan Linyuan:3.21; Henan Baiyun: 1.86; Guangxi Nanning Pumiao:NA.	Sichuan Jinfu: 3.01; Hunan Linyuan: 4.09; Henan Baiyun: 1.59; Guangxi Nanning Pumiao: NA.	Sichuan Jinfu: 4.83; Hunan Linyuan:4.65; Henan Baiyun: 3.33; Guangxi Pumiao: NA.
Date	29-Mar-2012	31-Aug-2017	28-Feb-2018	30-Jun-2017

Comments

The end target has been met and the improved performance remained stable.



► NH3-N discharge per unit of non-wood pulp production from the four mills (Text, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	Sichuan Jinfu: 0.72;Hunan Linyuan: 0.45;Henan Baiyun: 0.21;Guangxi Nanning Pumiao: 0.18;	Sichuan Jinfu: 0.17;Hunan Linyuan: 0.12; Henan Baiyun: 0.11;Guangxi Nanning Pumiao: NA.	Sichuan Jinfu: 0.35;Hunan Linyuan: 0.29; Henan Baiyun: 0.12;Guangxi Nanning Pumiao: NA.	Sichuan Jinfu: 0.43; Hunan Linyuan:0.41 Henan Baiyun:0.15 Guangxi Pumiao: NA
Date	29-Mar-2012	13-Jan-2017	28-Feb-2018	30-Jun-2017
Comments	The end target has been met and the improved performance remained stable.			

► Water consumption per unit of non-wood pulp production from the mills (Text, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	Sichuan Jinfu: 72.0 Hunan Linyuan:59.0 Henan Baiyun:70.0 Guangxi Pumiao: 94.4	Sichuan Jinfu: 36.55; Hunan Linyuan: 42.12; Henan Baiyun: 45.27; Guangxi Pumiao: NA;	Sichuan Jinfu: 339.87; Hunan Linyuan: 39.07; Henan Baiyun: 41.6; Guangxi Pumiao: NA;	Sichuan Jinfu: 53.6 Hunan Linyuan:52.2 Henan Baiyun:49.2 Guangxi Pumiao: NA
Date	29-Mar-2012	13-Jan-2017	28-Feb-2018	30-Jun-2017
Comments	The end target has been met and the improved performance remained stable.			

► Sectorwide BAT/BEP Guideline developed (Text, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	Finalized	Issued	Issued
Date	30-Jun-2012	31-Aug-2017	28-Feb-2018	30-Jun-2018
Comments				



The guideline has been issued since last ISR. The end target has been met.

► UPOPs monitoring guideline for the pulp and paper sector developed (Text, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	Issued and implemented.	Issued and implemented.	Issued and implemented
Date	30-Jun-2012	31-Aug-2017	28-Feb-2018	30-Jun-2017

Comments

**It has been issued and implemented by the four provincial EPBs (four dioxin testing labs).** The end target has been achieved.

► National workshops on BAT/BEP knowledge dissemination to mills (Number, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	3.00	3.00	3.00
Date	30-Jun-2012	31-Aug-2017	28-Feb-2018	30-Jun-2018

Comments

**56 paper mills** joined 3 rounds of training workshops in Guangxi, Sichuan and Shandong provinces in May, June and July, 2017. The end target has been achieved.



## ▶ National training on BAT/BEP for design institutes (Number, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	1.00	1.00	1.00
Date	30-Jun-2012	31-Aug-2017	28-Feb-2018	30-Jun-2017

## Comments

35 representatives from *design institutes* joined a training workshop in Beijing in July 2017. The end target has been met.

## ▶ Training on rapid method dioxins monitoring for provincial and municipal EPBs (Number, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	3.00	3.00	4.00
Date	30-Jun-2012	13-Jan-2017	28-Feb-2018	30-Jun-2018

## Comments

Unit of Measure: Number of training courses // number of EPBs

This intermediate result was fully achieved for Year 4 (July 1 2015-June 30 2016). EPBs in the four project demonstration provinces participated in the training. Targets for Year 5 and 6 were revised/added as result of the project restructuring. Year 5 target 3//12, meaning 3 training courses will be delivered for 12 EPBs, which has been met. Year 6 target 4//16 is expected to be achieved during June-August 2018.

## ▶ Increased UPOPs monitoring for pulp and paper mills in the participating provinces. (Text, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	15.00	15.00	8 mills dioxins emissions, monitored, enforced
Date	30-Jun-2012	31-Aug-2017	28-Feb-2018	30-Jun-2018

## Overall Comments

Monitoring is Year 6 is expected to be completed in the first half of 2018.



## Data on Financial Performance

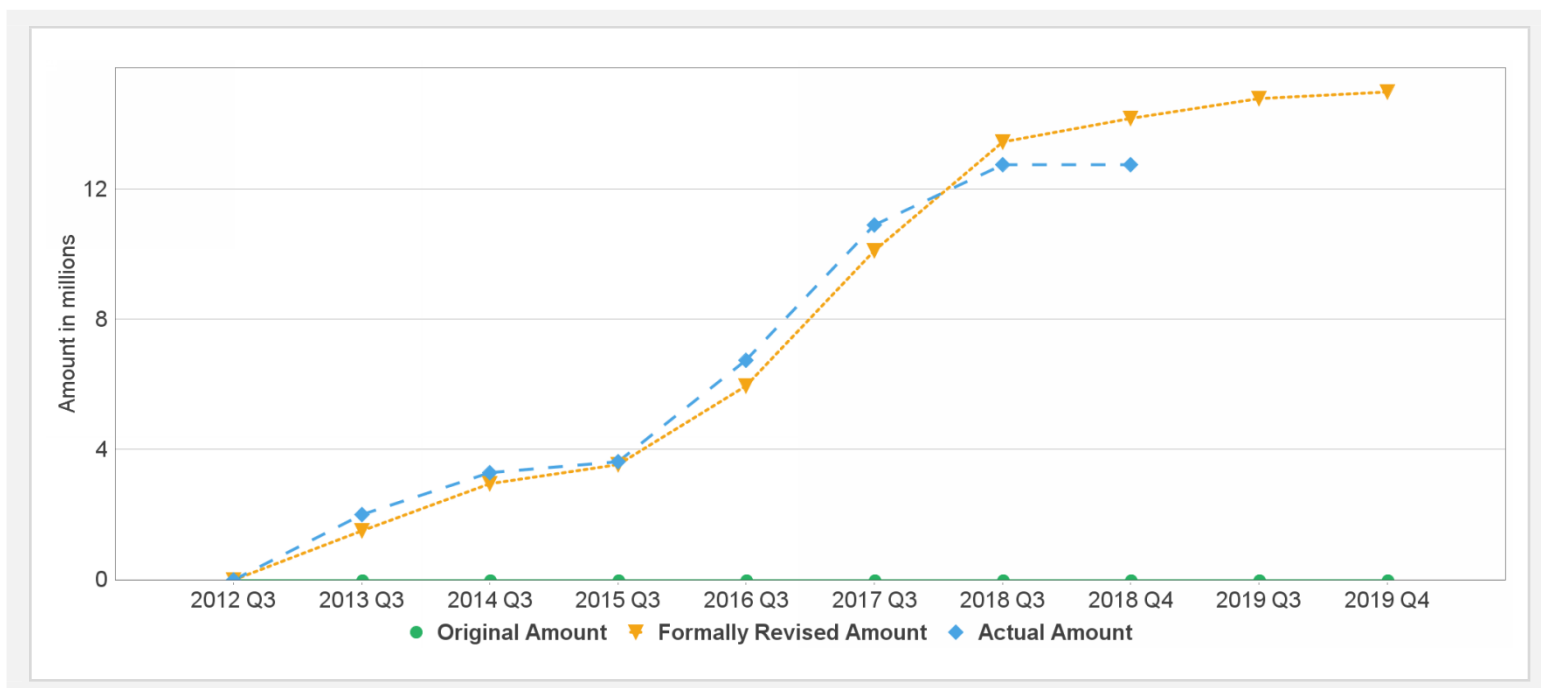
### Disbursements (by loan)

Project	Loan/Credit/TF	Status	Currency	Original	Revised	Cancelled	Disbursed	Undisbursed	Disbursed
P125528	TF-11898	Effective	USD	15.00	15.00	0.00	12.76	2.24	85%

### Key Dates (by loan)

Project	Loan/Credit/TF	Status	Approval Date	Signing Date	Effectiveness Date	Orig. Closing Date	Rev. Closing Date
P125528	TF-11898	Effective	25-May-2012	25-May-2012	19-Jun-2012	30-Jun-2017	30-Jun-2018

## Cumulative Disbursements



## Restructuring History

Level 2 Approved on 15-Nov-2014 ,Level 2 Approved on 28-Jun-2016

## Related Project(s)

There are no related projects.



