



COOPERATION WITH THE PRIVATE SECTOR IN AFRICA

DEVELOPMENT PARTNERSHIPS WITH THE PRIVATE SECTOR (DPP)



ANNEXE 2

OPERATIONAL PLAN

Title of the project	Date	18-07-2012
Protection of resources and climate by treatment and recovery of locally arising wastes as alternative fuel (AF) in the local cement industry	Private Partner	CIMAT S.A., ThyssenKrupp Polysius AG
	Measure No.	2012-005
	Project period	09.2012 - 03.2015

Overall goal	A mass flow management system serving the recovery of energy and useful materials from commercial, industrial and domestic waste with high calorific content by conversion to quality controlled alternative fuels (AF) is developed and put in place with involvement of the private sector, municipalities, the informal sector and waste management authorities.	Indicators	<ul style="list-style-type: none"> - An initial plant unit for producing 50.000 t/a quality controlled AF is in operation and continuously supplying products to the cement factory of the pilot project pursuant to the contractually agreed specifications and according to the established quality standards. - The cement producer of the pilot project adheres to the provisions of the EU Directive on co-incineration of waste as fuel substitutes in co-processing and achieves by the end of 2015 a substitution rate of 25% of the employed fossil fuels for an AF input rate of 50.000 t/a. - A regulation governing the use of waste materials for co-incineration is in force, and the current directive regarding the use of waste as secondary fuel is implemented in the form of an arrêté by the end of 2014 as a legally binding regulation. - A concept for transferring the informal sector into formalized services is developed in cooperation with Initiative Nationale de Développement Humain (INDH) and at least ten selected actors from the regions surrounding the processing plant are being familiarised with their new functions.
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COOPERATION WITH THE PRIVATE SECTOR IN AFRICA



DEVELOPMENT PARTNERSHIPS WITH THE PRIVATE SECTOR (DPP)

Output 1.1		The project baseline on available waste resources, compositions and logistics is established	Indicator			
			The logistical and qualitative preconditions for the use of commercial-industrial and/or communal waste in the target region are assessed and the available quantity and potential of commercially usable waste is estimated and available as a baseline study.			
No.	Activity	Milestone/ Document	Responsible	Achieved until	Remarks	
1.1	Establish baseline on available waste resources, compositions and logistics in the project region:			03.2013		
	1.1.1 Assess economic (commerce, industry) and alternative sectors with regards to their potential for waste production	The existing sectors with potential of waste production are determined	GIZ-PGPE	12.2012		
	1.1.2 Estimate available quantities	Amount and access to waste is assessed	GIZ-PGPE	03.2013		
	1.1.3 Assess waste composition: compounds and share, incl. investigation regarding calorific value(s), ash, composition of ash, chlorine, sulphur and heavy metals	Waste characteristics are documented	ThyssenKrupp Polysius/Veco plan-FlueTrack *) (VFT)	03.2013	*) consulting contract	
AR	1.1.4 Assess the organization of the public and the private disposal system	Jurisdiction and form of organization (i.e. under own direction, public-private-partnership) are clarified	GIZ-PGPE	10.2012		
AR	1.1.5 Assess collection system and logistic and identify potential disposal/transport providers for integration in AF production process	ToR for logistic services are analyzed and contact to interested service providers are established	GIZ-PGPE	03.2013	See 2.6	
SA	1.1.6 Identify the role of the informal sector (amongst other measures, by using the Poverty Impact Assessment (PIA) Tool)	PIA of the project exists as a document	GIZ-PGPE / GIZ CCCPS	03.2013		
SA	1.1.7 Develop a concept on how to integrate the informal sector (in cooperation with INDH)	Concept for transferring informal sector into formalized agreements for providing waste sorting services exists	GIZ-PGPE	05.2013	See also PIA	



COOPERATION WITH THE PRIVATE SECTOR IN AFRICA

DEVELOPMENT PARTNERSHIPS WITH THE PRIVATE SECTOR (DPP)



Output 1.2		The project baseline on current cement processing and future needs is established	Indicator			
			Base line study on the organizational, technical and commercial requirements for processing AF in the cement plant (upgrading) is available			
No.	Activity	Milestone/ Document	Responsible	Achieved until	Remarks	
1.2	Establish baseline on current cement processing undertaken by local cement works:			01.2013		
	1.2.1 Identification of local cement works and catchment area in the project regions	Logistic and catchment area determined	CIMAT	12.2012		
	1.2.2 Examine existing and needed technical equipment regarding thermal valorization potential, process and handling of AF by the local cement works	Procedural review of the cement works established	CIMAT	12.2012		
	1.2.3 Test the quality impact on product and process by main, minor and trace elements	Simulation and projection of processing conducted	CIMAT	12.2012		
	1.2.4 Analyze emissions (dust, SO ₂ , NO _x , Cl, Hg, Cd, Tl...) in the local cement works	Emission analysis established	CIMAT	12.2012		
	1.2.5 Draw up prognosis of emission of local cement works	Computation of future emissions undertaken	CIMAT/ VFT	12.2012	*)	
	1.2.6 Establish an energy balance	Specification of energy consumption	CIMAT/VFT	12.2012	*)	



COOPERATION WITH THE PRIVATE SECTOR IN AFRICA

DEVELOPMENT PARTNERSHIPS WITH THE PRIVATE SECTOR (DPP)



Output 1.3 + 1.4		The project baseline on the potential for production of AF is established	Indicator		
			<ul style="list-style-type: none"> - Requirement profile for the efficient production of up to 50.000 t/a AF is available - Base line study on relevant rules and regulations established - Important third party actors are identified and familiarized with the project 		
No.	Activity	Milestone/ document	Responsible	Achieved until	Remarks
1.3	Establish baseline on the potential for production of AF	Base line study of AF established		03.2013	
1.3.1	Establish parameters for combustion, production and monitoring of emissions	Specification of parameters for the production of AF established	CIMAT	03.2013	
1.3.2	Monitor parameters e.g. particle size, calorific value, chlorine, moisture content	Reports established	CIMAT	continuous	Also cross check with results from HOLCIM partnership and EU directives.
1.3.3	Draw up prognosis of emissions incurred by combustion of AF	Computation of emissions undertaken	CIMAT	12.2012	
1.3.4	Identify potential operators for waste treatment plants for production of AF	Contact established with interested operators for investment in waste treatment plant	GIZ-PGPE +CIMAT	03.2013	See also 3.3 and 3.4
1.3.5	Sensitize industrial waste producers	Industrial waste producers in the region are familiar with AF processing	GIZ-PGPE	03.2013	
1.4	Establish baseline on relevant rules and regulations			03/2013	In combination with 1.2.5
1.4.1	Approach competent authorities regarding the formulation of sublegal rules and regulations (waste management and environmental protection) and establish standards for co-processing as a directive	Regulation governing the use of waste materials for co-incineration is in force, and the current directive regarding the use of waste as secondary fuel is implemented in the form of an arrêté.	GIZ-PGPE	Continuous until 12.2014	
1.4.2	Clarifying the license conditions and the participation of public units	Overview and profile of the documents required for a license exists as a summary	GIZ-PGPE	continuous	
1.4.3	Coverage of social aspects and informal care	Compendium with regular publication	GIZ-PGPE	09.2012	



COOPERATION WITH THE PRIVATE SECTOR IN AFRICA



DEVELOPMENT PARTNERSHIPS WITH THE PRIVATE SECTOR (DPP)

Output 2		An appropriate waste stream management system is established	Indicator	A mass flow management system identifies potentially suitable types of waste for use as AF according to source, volume and properties, as well as according to the organisational, logistical, technical and economic aspects of availability for the target regions, and submits an initial balance by mid-2013.		
No.		Activity	Milestone/ document	Responsible	Achieved until	Remarks
2.1		Assess the financial demand for investment and operation of the processing installation and the installation of the facilities for co-processing	Detailed document on costs for investment and operation exists	CIMAT	03.2013	
2.2		Develop technical concept for pre-processing incl. achieving qualitative parameters	Concept for quality controlled pre-processing of secondary fuel is established	CIMAT/ GIZ-PGPE	03.2013	
2.3		Scoping of environmental impact study and safety analysis	Scoping Study is available as document	CIMAT/ GIZ-PGPE	06.2013	Case example
2.4		Clarification of logistical issues	Cost structure of the supply chain of solid waste established	CIMAT (+GIZ PGPE)	03.2013	
2.5	AR	Assure access to appropriate/feasible waste streams - Implement instruments of internal waste management - Estimate economic-usable fractions of household waste	- Training courses for the waste generators are conducted - Available quantities of solid household waste are determined	GIZ-PGPE	09.2013	
2.6		Stimulate companies active in the disposal/transport sector to recognize the business potential for expanding their services	Companies are interested to act as intermediaries between waste producers and AF producers and some of them will invest in the segment.	GIZ PGPE (+ CIMAT)	09.2013	Important indicator for potential breaking point (see cooperation agreement)
2.7	SA	Conduct further information campaigns for the informal sector	Information material and meetings are developed, distributed and conducted	GIZ-PGPE / CIMAT	06.2013	
2.8	SA	Stepwise integration of the informal sector for the provision of suitable wastes (in cooperation with INDH)	Workshops and informational meetings with representatives from the informal sector are conducted and documented	GIZ-PGPE /CIMAT	continuous	See also 1.1.7



COOPERATION WITH THE PRIVATE SECTOR IN AFRICA

DEVELOPMENT PARTNERSHIPS WITH THE PRIVATE SECTOR (DPP)



2.9	Clarify practical enforcement of Moroccan legal specifications	Related information and recommendations to work out the sub-legal specification exist	GIZ-PGPE (+CIMAT)	06.2013	
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Output 3	The financial and economical criteria are known and investment decisions are made	Indicator - The supply of defined quantities is assured by means of framework agreements with the waste producers and the cement factory - The supply of SF to the cement factory of the project partner is regulated by a multi-year contract			
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No.	Activity	Milestone/ document	Responsible	Achieved until	Remarks
3.1	Cost and profit analysis regarding the chain of waste management, disposal charge and fees	Cost- benefit- ratio exist as a living document	CIMAT/GIZ	06.2013	
3.2	Prepare Business Plans for the processing installation and the installation of the facilities for co-processing	Business plans are established	CIMAT / GIZ	06.2013	
3.3	Familiarization with the identified potential third party operators (for disposal/transport services as well as waste treatment plant)	Decisions on investments have been made by third party operators (alternatively CIMAT, see 3.4)	GIZ / CIMAT	09.2013	Important indicator for potential breaking off point (see cooperation agreement)
3.4	Decide on investment in waste treatment plant (installation engineering)	Decision on investment has been made	CIMAT	09.2013	Important indicator for potential breaking off point (see cooperation agreement)



COOPERATION WITH THE PRIVATE SECTOR IN AFRICA



DEVELOPMENT PARTNERSHIPS WITH THE PRIVATE SECTOR (DPP)

Output 4		The commissioning and operation of the processing plant and the installation of facilities for co-processing are realized with a functioning quality assurance system	Indicator		
			<ul style="list-style-type: none"> - The cement producer of the pilot project adheres to the provisions of the EU Directive on co-incineration of waste as fuel substitutes in co-processing and achieves by the end of 2015 a substitution rate of 25% of the employed fossil fuels for an AF input rate of 50.000 t/a. - A system for assuring quality in the handling of waste materials and benchmarks for producing quality controlled AF are developed, discussed and agreed with the actors and published in the form of a standard entitled "Quality and test requirements for secondary fuels derived from waste with high calorific content". 		
No.	Activity	Milestone/ document	Responsible	Achieved until	Remarks
4.1	Elaborate and edit standards "Quality and test requirements for secondary fuels derived from waste with high calorific content".	Standard is available as a living document.	GIZ	03.2014	
4.2	Establish a quality assurance system	Standard on quality assessment for AF out of calorific waste is implemented by all corporative actors	CIMAT/GIZ	12.2014	*)
4.3	Facilitate logistics and delivery of secondary fuel	Model contract for the delivery of AF concluded between cement works and operator of the processing plant	CIMAT/GIZ	03.2014	
4.4	Plan, supervise and assist in plant commissioning and plant operation coach	Program for coaching newly recruited members with low compliance culture	CIMAT	03.2014	
4.5	Provide job description of staff management for the processing plant and the cement works	Job description established	CIMAT/GIZ	04.2014	
4.6	Conduct informational meetings with actors from the informal sector	At least ten selected actors from the regions surrounding the processing plant are being familiarised with their new functions.	CIMAT (+ GIZ PGPE)	12.2014	



COOPERATION WITH THE PRIVATE SECTOR IN AFRICA
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DEVELOPMENT PARTNERSHIPS WITH THE PRIVATE SECTOR (DPP)



Output 5		Evaluation and monitoring	Indicators		
		The indicators defined for in/direct benefit, utilization and achievement in the project-specific monitoring plan are examined and documented			
No.	Activity	Milestone/ document	Responsible	Achieved until	Remarks
5.1	Elaborate a project-specific monitoring plan with indicators for in/direct benefit, utilization and achievement	Plan of monitoring established	GIZ-PGPE	03.2013	
5.2	Conduct emission tests	Dimensional report established	CIMAT	03.2015	
5.3	Apply the monitoring plan and take care of public-relationship	Workshops held, list of trained focal points available, Scoping-procedure, Press release	CIMAT/ VFT/ GIZ-PGPE	Continuous (report after 03.2015)	Documentation of monitoring