TAAS – Completion

(Including final supervision)

Project Information: [By clicking on **(i)** you will get additional information for associated section/field. Some information in this document is populated from iDESK, TAAS PDS Approval & TAAS - Supervisions.]

Data populated
Data Entry

Region: LAC	*Country:* Peru	*Sector:* X-XX - Other
Business Line: Environment and Social Sustainability	*Business Line sub-area(s):* Cleaner Production; Cleaner Technologies; Sustainable Energy	
Primary (Originating) Dept/Division: CESSE - Environment & Social Development/Sustainable Energy	*Implementing Dept/Division:* CESSE	
Client Name: IFC (BMS 3301) (518619)	*Project/Transaction Leader:* Sandeep Kohli	
Project ID: 523361	*Project Short Name:* SEGEF PeruBiofue	*Project Long Name:* GEF SE Biofuels Transportation and Processing Opportunity (PBTPO)
Original Approval Date: Mar. 2, 2007	*Total Funding:* 1,054,800	*Actual Project Duration:* 54 months

	Original (i)	Revised (i)	Actual (i)
Project Implementation Start	Jul. 1, 2004		Jul. 1, 2004
Project Completion	Jul. 1, 2007	Jun. 1, 2009	Dec. 31, 2008

Relationship to IFC Project(s)	*Relationship Type*	*Project ID*	*Project Long Name*
IFC TAAS Project	None		
IFC Investment Project	None		
Recipients SME Company	*Beneficiaries* SME Company		

Objective	Original (Mar 02, 2007) - The objective of the proposed project is to remove barriers to the (increased) comercial use of biofuels and non-wood cellulose from agricultural residues and wastes as a substitution for fossil fuel based electricity, generation, thereby reducing GHG emisions of electricity generation activities. See also, Project Brief Document, Block 2, page 7. Most recent update - N/A

Key Highlights (i) *Summarize key project highlights*	Entire Project: Project success was predicated on the development of a successful truck-mounted prototype of the "green sugarcane harvesting" equipment, and its trial operations in a selected Peruvian sugar mill. This did not occur due to the equipment's destruction. However, the project still had some significant successes, as enumerated below: 1. After transferring a stalled project over from UNDP, TL successful restructured it with a new risk sharing structure which involved active risk taking and leadership by AB Volvo. 2. New partnering arrangements were blessed by donor (GEF), IFC Mgmt, and partners. 3. Prototype design and testing was undertaken at a very professional level using Volvo team, equipment, and relationships. 4. Successful pre-trials were conducted in Spain, where the equipment performed well, mounted on specially equipped Volvo truck. 5. AB Volvo continues to express a desire to work with IFC and many high level contacts, including at the level of IFC EVP were made in connection with the said project. Despite these successes, the equipment destruction in Spain, and an adverse market has prompted AB Volvo to exit the project. With no new finances in sight for the development of a new prototype, the project is now being closed, with a recommendation to management that under the new SBI product of Technology Commercialization, if there is a future appetite to work further on this technology, the base laid through the trials in Spain, will be very helpful.
	Reporting period since last supervision: 6 months since last PSR

Lessons Learned:

Delete Row (i)	Lesson Area (i)	Comments and Suggestions (e.g. What worked well? What would you have done differently?) ☐ **Add Additional Lessons Learned Row**
	Design/planning	The earlier UNDP structure was not workable, and did not have AB Volvo as a participant. With small players - Monder and WSM as the only parties, the project had stalled for over 4 years. IFC proposed new structure with risk sharing of prototype costs with AB Volvo was a very important and good design change. As a result, AB Volvo shared US$ 100,000 in the prototype, and also provided a specially equipped truck, personnel, and workshop support for the development of the prototype. TL believes that this went a long way in developing a successful prototype.
	Pricing	The structure for Phase1 was of a contingent grant, proceeds from which would be used to structure Phase 2 TA activities. This was an appropriate approach, given the significant co-financing (in funds and other resources) that went into this from the partners.
	Implementation/delivery	While the TL took pains to involve the team in Peru, on both the TA and investment side, this was difficult since the project activities were mostly outside Peru. However, the TL undertook introductions to the local team, and had them participate in partner trips even when TL did not join in. Also, TL worked with the appropriate investment team members in DC to find out more information on appropriate whetting of partners, selecting a sugarmill, as well as exploring business evelopmet opportunities.
	Development Results	More focus on developing a Knowledge Product would be useful, since the exercise of partnering, prototype building, and testing is something that would be useful for other Technology Commercialization project.
	Project team	The project was too thinly staffed at IFC side, with one TL handling this and over 10 other projects. There was no assistance in structuring, or in putting in place the appropriate insurance pieces for equipment. In retrospect, with guidance from Insurance and other Depts. such risks should have been insured. What this needs is a more robust team, similar to what is available on the investment side of IFC.
	Consultant work	Very little consultant work was done on this project.

Delete Row (i)	Lesson Area (i)	Comments and Suggestions (e.g. What worked well? What would you have done differently?) ☐ **Add Additional Lessons Learned Row**
	Client commitment/satisfaction	Clients (Monder, WSM, and Volvo) were all very satisfied with IFC role and performance. However, partnering between a large corporation like Volvo and two small financially weak entities was a challenge. For the future, such partnering should be done with more manpower and funding for "hand-holding" at a more formal level.
	Funding leverage	GEF funds were levered better than anticipated at the Phase 1 level, with the participation of AB Volvo. However, the big expectation of leverage would have come from Phase 2, when the prototype after successful testing in Perus would enter into the large-scale production phase. This did not happen.
	Experience with replicating	Unless new funding can be found, this particular prototype is unlikely to reach commercialization. However, there is merit in the exercise undertaken, and can inform other Technology Commercialization projects.
	Link with IFC Investment	If successful, the link with IFC investments would be substantial. AB Volvo was looking to set up large scale manufacturing in their truck facilities in Brazil, and were takaing a regional approach to promoting "green sugarcane harvesting." TL believes there is still merit in pursuing this further, perhaps as a different project.

Follow up opportunities:

	TAAS	**Investment**
Are there new business development or replication opportunities?	Yes	Yes
If yes, *1. Describe opportunity*	Building a knowledge management product for technology commercialization, based on the experience with this project.	Further opportunities to work with Volvo on the investment side. Areas for cooperation include: (a) green fuels (CAG possibility), (b) municipality level financing of trucks (Sub-Sovereign Dept.), (c) Volvo partnerships for new plants in developing countries (CGM). However, given the adverse economic conditions faced by the transport sector, and by AB Volvo, such interaction may need to occur at a more opportune time in the future.
2. Recommended follow up action	Contact partners and pursue this theme.	Volvo contact provided to Team Leader. He needs to engage with investment depts.

Summary of Supervision Performance Ratings:

Performance Category (i)				
Supervision Reporting Period	Development Results	Financial	Timeline	Overall
#1[As of Jun. 30, 2007]	B - Slightly Below Targets	A - On or Under Budget	C - Significantly Delayed	B - Some Areas of Underperformance
	Rationale for overall performance rating assigned The project timelines will be significantly delayed, but if the partnership decides to continue to support the project and solve the current problems, this project will come out stronger and more resilient than before. Volvo's presence and the perseverence of the Peruvian and Swedish entrepreneurs, provides hope that despite the loss, the project will continue.			
#2[As of Dec. 31, 2007]	C - Significantly Below Targets	A - On or Under Budget	C - Significantly Delayed	B - Some Areas of Underperformance
	Rationale for overall performance rating assigned It has been determined that the cause of the fire was not the equipment being tested. However, the accident has resulted in a significant setback to the project, and delays. The results of the test, however, were positive, and if the partners can regroup, the product still has value.			

Performance Category (i)				
Supervision Reporting Period	Development Results	Financial	Timeline	Overall
#3[As of Jun. 30, 2008]	C - Significantly Below Targets	A - On or Under Budget	C - Significantly Delayed	B - Some Areas of Underperformance
	Rationale for overall performance rating assigned Not applicable, since project is on hold. The technology tests in Spain were successful, but the destruction of the equipment in a fire has meant that the project cannot move forward unless partners put in additional financing.			
#4 [As of Dec. 31, 2008]	C - Significantly Below Current Targets	A - On or Under Budget	C - Significantly Delayed	B - Some Areas of Underperformance
	Rationale for overall performance rating assigned The prototype equipment was developed and successfully tested. However, the trials and sale in Peru, which were a key part of the structure never occurred.			

Development Effectiveness: [Click on respective **(i)** for guidance on rating.]

	Highly Unsuccessful	Unsuccessful	Mostly Unsuccessful	Mostly Successful	Successful	Highly Successful	Not Applicable
Development Effectiveness- Synthesis Rating *(Based on criterion 1-5)* (i)	☐	☒	☐	☐	☐	☐	☐
Rationale	While the pre-trials were a success, since the prototype did not reach Peru, and was not tested on the ground, no impacts were achieved in Peru.						

	Unsatisfactory	Partly Unsatisfactory	Satisfactory	Excellent	Not Yet Achieved	Meets Exclusion Criteria (i)
1. Strategic Relevance (i)	☐	☒	☐	☐		
Rationale	The priority on green can harvesting is appropriate, but circumstances outside our control (fire and current economic downturn) intervened in producing less than appropriate results.					
2. Output Achievement (i)	☒	☐	☐	☐		
Rationale	Prototype pre-trials were successful, but with destruction of equipment, the partneship appears to have dissolved. No further progress expected in the near term.					
3. Outcome Achievement (i)	☒	☐	☐	☐	☐	☐
Rationale	The project generated significant interest in Peru. University, sugar mills and local sponsor continue to be very interested in the green technology. However, with the dissolution of the project, you will have little follow-up.					
4. Impact Achievement (i)	☐	☒	☐	☐	☐	☐
Rationale	TL believes that the idea of harvesting cane without burning of the undergrowth is something that has begun to take root in Peru. The project also generated interest in energy crops, and in growing crops like sweet sorghum for energy purposes.					
5. Efficiency (i)	☐	☐	☒	☐		
Rationale	Project was implemented with minimal IFC resources. The successful development of a prototype is a non-trivial achievement.					
6. IFC Role and Contribution (i)	☐	☐	☒	☐		
Rationale	IFC played a pivotal role in bringing together 3 players - local sponsor, technology provider, and deep pocketed replicator. This is a model that management was seeking to replicate in the development of a product designated, "Technology Commercialization." This project and its lessons could inform the development of that product.					

Post completion monitoring recommendation [Based on outcome and impact indicator level recommendation within Development Results section that follows]	
Recommended	No
Recommended duration for annual	

post completion monitoring	
Approach for post project completion monitoring (including estimated level of effort, resources and funding source)	Recommend that the Practice Area Lead continue to pursue partnering opportunities with all partners, and also develop a Knowledge Management product around the lessons learned.

Development Results

Outputs (i)									☐ Add Outputs Row
				Targets (i)			Results (i)		
Delete Row (i)	**Component /Activities (i)**	**Discontinued (i)**	**Indicators (i)**	Cumulative		Changes during prior periods	Change during this Period	Cumulative	
				Original	Revised				
☐	Building of prototype	☐ Select reason	Number of Strategic and Funding Partnerships established	0.00		1.00	0.00	1.00	

Outcome (i)													☐ Add Outcome Row
						Targets (i)			Results (i)				
Delete Row (i)	**Component /Activities (i)**	**Discontinued (i)**	**Indicators (i)**	**Baseline (i)**		Cumulative			Changes during prior periods	Change during this Period	Cumulat -ive	Is post project completion monitoring by unit outstanding?	If yes, annually for how many years?
				Original A	Revised B	Original	Revised	Expect to achieve by	C	D	E=(A,B) +C+D		
☐	Report on energy crop scope in Peru	☒ Dropped	Number of firms/FIs adopting sustainable practices based on advisory services	0.00		2.00		3-4 yrs post	0.00	0.00	0.00	No	Select one
☐	Successfully operate the prototype at a pilot farm or mill	☐ Select reason	Number of new business models or new financial products implemented	0.00		1.00		3-4 yrs post	0.00	0.00	0.00	No	Select one

Impacts (i)													☐ Add Impacts Row
						Targets (i)			Results (i)				
Delete Row (i)	Component /Activities (i)	Discontinued (i)	Indicators (i)	Baseline (i)		Cumulative			Changes during prior periods	Change during this Period	Cumulat -ive	Is post project completion monitoring by unit outstanding?	If yes, annually for how many years?
				Original A	Revised B	Original	Revised	Expect to achieve by	C	D	E=(A,B) +C+D		
☐	Change in cane harvest practices towards "green harvesting."	☐ Select reason	Total gross sales (US $) of clean technologies to developing country markets	0.00		0.00		3-4 yrs post	0.00	0.00	0.00	No	Select one
☐	Implementing green equipment to produce energy	☐ Select reason	GHG emissions avoided (metric tons/year) directly	0.00		1.00		3-4 yrs post	0.00	0.00	0.00	No	Select one

Comments on development results achieved

Entire Project (including additional relevant results (positive and negative) other than those planned)	SBI at the time was not structured or staffed to take on projects of this nature. In order to be more successful in this arena, there are 2 key suggestions: 1. Projects should be run by a team with diverse members lead by the TL, in a manner similar to investment projects. 2. Management should be prepared for long development cycles and a significant failure rate for projects dealing with technology commercialization.
Reporting period since last supervision	Project was on hold for nearly 2 years. TL continued to keep in touch with the team and check status.

Financial (USD):

Funding									
Original (i) Mar. 2, 2007	Revised (i)	Actual Expenses (i)			Outstanding Purchase Order Commitments (i)	Total Expenses + Commitments		Funding Balance	
		As of Jun. 30, 2008	From Jun. 30, 2008 to Dec. 31, 2008	Total Dec. 31, 2008		Amt	%	Amt	%
A	B	C	D	E = C + D	F	G = E + F	H = G/(A,B)	I = (A,B)-G	J = I/(A,B)
1,054,800	1,054,800	773,058.20	1,202.00	774,260.20	0.00	774,260.20	73.00%	280,539.80	27.00%
Explanation for significant variances between (1) original and revised funding (A vs. B) and (2) approved/revised funding and total expenses + commitments (A/B vs.G)									

Pricing Goals (i)	
Charging for Products/Services (Yes/No)	No
Charging details	
Comments *Describe the key factors in setting the charging structure. If No selected above, specify reason.*	Not applicable

Fees/Contributions								
	Original (i) Mar. 2, 2007	Revised (i)	Receipts (i)				Fees/Contributions Balance	
			As of Jun. 30, 2008	From Jun. 30, 2008 to Dec. 31, 2008	Total Dec. 31, 2008 Amt	%	Amt	%
	A	B	C	D	E = C + D	F = E/(A,B)	G=(A,B)-E	H=G/(A,B)
Cash Fees from Recipients	0	0	0.00	0.00	0.00		0.00	
In-Kind Contributions	580,062	0	100,000.00	0.00	100,000.00	17.00%	480,062.00	83.00%
Other	12,715,350	0	200,000.00	0.00	200,000.00	2.00%	12,515,350.00	98.00%
Explanation for significant variances between (1) original and revised fees/contributions (A vs. B) and (2) approved/revised fees/contributions and related total receipts (A/B vs. E)								

WBS Status ☐ Add WBS Row								
Delete Row (i)	Discon-tinued (i)	WBS element	Name	Closed	Expected/ Actual close date	Outstanding commitments	Outstanding Fees	Comments
☐	☐	IFC-00523361-TF055532	IFC-00523361-TF055532	Yes	Dec. 23, 2008			

Timeline:

Delete Row (i)	Key Activities for Reporting Period	Activity Status	Timeline	☐ Add Timeline Row

Explanation for delays in start and/or completion of key activities and resulting impact on overall project timeframe.

Consultants: [This information should be entered manually]

Delete Row (i)	Consultant Name/Firm	Expertise/Comments [In line with IFC Legal requirements, consultant performance information should NOT be provided]	☐ Add Consultant Row

Project Team: [This information should be automatically populated from iDESK]

Core Team Members	Primary	Proxies
Transaction Leader	Sandeep Kohli	Thanh Thuy T. Nguyen, Vinitha R. Jayalal, Angelita B. Coloma, Diana Mirzakarimova, Shir Ashar Naveh, Nazira Abdukhalilova, Maria del Rosario Rojas
Monitoring and Evaluations Officer	Baljit Wadhwa	Thanh Thuy T. Nguyen, Shir Ashar Naveh, Jacqueline Bueso-Merriam
Finance Officer	Diana Mirzakarimova	CES Finance and Budget Team
Team Assistant	Vinitha R. Jayalal	
Other Team Members	Cecilia Lim, David Martz, OEG Monitoring	
Management Team	**Primary**	**Proxies**
Unit Line Manager	Russell Sturm	Lisa Da Silva
Unit Manager	Monika M. Weber-Fahr	Annie Go Dizon, Thanh Thuy T. Nguyen, Alan Miller

Additional Comment(s):

The partners - Monder SAC, WSM, and AB Volvo all performed their duties with commitment. The discussions between partners were vigorous, and at times TL had to play a mediating role to reach consensus. The learning from the exercise was around issues such as quality of prototype, rigor of testing, criterea for the selection of the appropriate sugarmill for testing and replication. Participating and helping decide these issues was challenging for all involved, but a very key part of the learning.

Review and Approval Status: [This information should be automatically populated from iDESK]

TL/M&E/FinO Initiate Completion - Initiate Completion by Maria del Rosario Rojas at 01/30/2009 05:12:00 PM
Comment : Workflow initiated on behalf of TL, as per his request.

Unit Line Manager Clear - Cleared to Unit Manager by Russell Sturm at 01/30/2009 06:30:26 PM
Comment :

Unit Manager Approve - Approved by Alan Miller at 02/06/2009 05:31:26 PM
Comment : this porject provides important lessons for current, ongoing consideration of greater IFC involvement in support of new clean energy technologies. As the project illustrates such investments are subject to risks in diverse forms from financial to technical and can fail at any time despite fundamentally sound technology