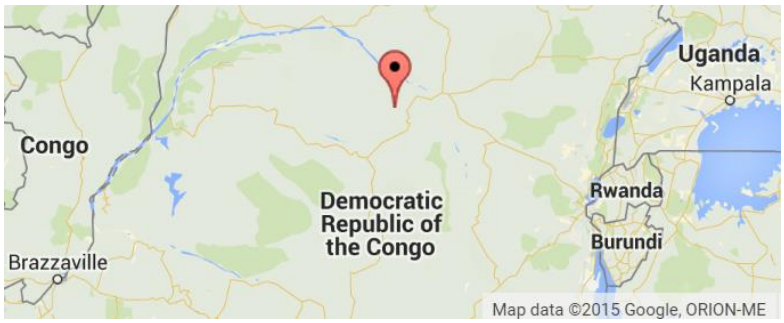
Isangi REDD+ Project

Distinctive features

Jadora, LLC (Jadora), the project proponent, has developed the Isangi REDD+ Project on a 348,000 ha parcel spanning two logging concessions leased by the DRC government to the Congolese company Safbois, in Isangi Territory. Prior to the project start date, Safbois planned to log the forested parts of the concessions on a 30-year rotation. The REDD+ project area contains one parcel of forest in the concession totalling 187,571 hectares. Active deforestation is occurring on three sides of the project area and inside the exterior boundaries of the project area.

Most of the area is covered by primary forest. 92% of the project area is high conservation value and supports numerous faunal species that are of global importance (i.e. *Pantherus pardus*). The project area has 16 RED listed or CITES listed species.



In the "without project" scenario, selective logging of the project area would be relatively low impact, as it would remove less than 3% of the carbon in the forest. Although the direct emissions from logging are minimal, the subsequent emissions from forest clearing and agriculture are substantial. New logging roads invite settlement by farmers that practice shifting agriculture. Forest is cut, wood is harvested for building materials and cooking fuel, and the remainder is burned to supply mineral-laden ash to fertilize soil.

The two key activities to reduce emissions from deforestation are: 1.Cease logging operations, with no shift in logging to other locales, 2. Reduce area of forest cleared for agriculture by establishing sustainable agricultural practices that improve crop production and intensify agriculture on existing farm land.

	Heading	Explanation
Locational factors		
	**Location**	Isangi Territory of Democratic Republic of Congo (DRC)
	Spatial boundaries	Project area: 201,731.5 ha Reference area: 4,174,000 ha Leakage monitoring area: 494,900 ha The project proponent has created a leakage belt around the project area to monitor forest cover change attributed to leakage. Information obtained from the spatial model used to perform the mobility analysis of the agents and drivers of deforestation determined the boundaries of the leakage belt. Leakage management area: [size not given in PDD]
	Land cover	Mostly primary forest – 2 types: upland "drier" and lowland "wetter" forests
	Agents and drivers of forest cover change	Agents: People living near the project area Underlying drivers: improvement and maintenance of roads in the project area; increasing population Proximate causes: Selective logging, followed by forest clearing and agriculture (Generally, the baseline scenario is the conversion of forest to cropland driven by the expansion, improvement and maintenance of roads in the project area,)
Basic project features		
	**Objectives**	**Climate** ▪ Reduce CO_2 emissions **Community** ▪ Increase community access to quality education ▪ Improve quality of life and alleviate poverty by promoting sustainable economic development and agricultural practices and improving public health ▪ Maintain the value of resources and ecosystem services that are fundamental to the basic needs of communities ▪Support communities in maintaining traditional, cultural, spiritual, and religious identities **Biodiversity** ▪ Maintain habitat for viable, abundant, and diverse natural populations ▪Reduce threats to rare, threatened, and endangered species ▪Maintain the function of the natural ecosystem ▪Increase local and global understanding of biodiversity in the area
	Proponent/s	▪ Jadora, LLC

	Actors involved in project design	▪ Jadora LLC – responsible for project design, development and execution ▪ Safbois S.P.R.L. – provides access to facilities and equipment at the project site, transportation and other logistics ▪ Emerging Pathogens Institute (University of Florida) – support for local healthcare initiatives ▪ Congolese National Herbarium – supports plant identification and specimen collection ▪ IFA-Yangambi- I' Institute Facultaire des Sciences Agronomies de Yangambi – works on agriculture, biology, and social capacity development research
	Tenure and Carbon rights holder/s	Tenure: ▪Government owned land leased to Safbois S.P.R.L as two logging concessions Carbon rights: ▪Carbon rights transferred to the proponent
	Upfront financing	Jadora
	Start date	01 August 2009
	Crediting period	30 years
	Baseline emissions	
	**Methodology**	VCS Methodology VM0006 version 2.1 Methodology for Carbon Accounting of Mosaic and Landscape-scale REDD Projects
	Reference data (unplanned deforestation/degradation)	Reference period: 1994-2009 Types of data used: SPOT, Landsat 7 and 8 scenes, waypoints
	Reference data (planned deforestation/degradation)	Not applicable
	Stratification of project area	1 forest strata (stratification of this forest was attempted during the classification process but there was no clear distinction between different forest strata)
	Deforestation rate and location	**Historical** 0.24% **Projected** **Likely baseline scenario** Selective logging of the project area with small impacts; New logging roads invite settlement by farmers that practice shifting agriculture; Forest is cut, wood is

		harvested for building materials and cooking fuel, and the remainder is burned to supply mineral-laden ash to fertilize soil. **Modelling procedure** ▪ SPOT imagery, 339 waypoints and 548 PSPs used as training data for interpreting Landsat 7 and 8 images. Logistic model that calculates deforestation probability on the basis of distance of a location from key landscape features was derived. ▪ Factors for the modelling are distance to roads, rivers, villages, and forest edge, and forest scarcity. ▪The baseline emissions are calculated by the results of the spatial model adjusted for regeneration rates
	Carbon pools	**Carbon pools included** ✓ × ▪Aboveground tree biomass ✓ ▪Belowground tree biomass ✓ ▪Non-tree woody biomass × ▪Litter × ▪Dead wood × ▪Soil ✓ ▪Wood products ✓ **Estimation method** ▪ 548 4, 14, and 20 meter radius nested circular PSPs used. Allometric models of live wood for African trees from Djomo et al. (2010) used. Belowground biomass was from the average root:shoot ratio for trees in primary tropical rainforest and in regenerating woodlands (Cairns et al. 1997, d'Oliveira et al. 2011). Literature values for soil organic matter were used (taken from verification report for Mai Ndombe REDD+ Project). Historical harvests used to estimate wood products
	Carbon stock changes	▪ Forests assumed to be replaced by cropland. Regeneration counted.
	GHG emissions	Non-CO_2 emissions from burning conservatively excluded.
	Net emissions without project	▪ 31,458,016 tCO_2e
Project GHG emissions reduction strategy		
	**Scope**	Avoided deforestation
	Activities	The project has four programs: ▪ An education program that builds capacity on agricultural intensification ▪ An improved access program that provides pest and

		disease resistant seeds ▪ A production program that 1. provides agricultural yields from demonstration and community farms, and 2. includes community agreements not to clear the land ▪ A land use planning program that includes agreement to cease logging
	Leakage mitigation strategy	▪ Alternative agricultural techniques that will increase the yield and length of time a field can be used before going fallow ▪ Distribute fuel-efficient wood/charcoal stoves to reduce leakage from carbon production
	Non-permanence risk mitigation strategy	▪ Risk of political instability: Cooperation and agreement with the Ministry of Environment, Nature Conservation and Tourism, and cooperating with outside groups such as the World Bank and UNDP. ▪ Risk of social instability: Provide education, health and economic benefits to local communities; Maintain consultations with communities ▪ Communities tempted by rising timber prices and mining potential give up their conservation agreements: Project maintains high level of transparency and cooperation
	Additionality	▪Alternative land use scenarios: Continuation of the pre-project land use as logging concession, followed by deforestation in slash and burn agriculture is the most likely without project land use scenario ▪Investment / barrier analysis: Project will cost US 14 million over its lifetime and the sale of VFUs is the only significant project revenue; Full-scale selective logging would produce a profit; No tourism services to fund a conservation project ▪Common practice analysis: It is not common practice for private companies to protect wilderness areas in Africa for financial return in the absence of carbon revenues
With-project emissions		
	**Effectiveness of measures**	Assumed to be 89.9% effective in stopping conversion of forests to cropland (The land use plans developed between Jadora and the communities do not permit the clearing of forest to cropland or settlements, thus the area of allowed cropland or settlement is zero and the effectiveness is equal to 1. The effectiveness of sustainable land use plans on the conversion from forest to settlement and clearing of forest for commercial logging were conservatively omitted.)
	Carbon stock changes	[As for baseline]

GHG emissions	Increased use of vehicles expected, but emissions from gases other than CO_2 account for less than 5% of emissions under the baseline scenario and are ignored
Leakage	**Types** Activity shifting: Possibly increased agricultural activities in surrounding areas **Deduction** 12%
Non-permanence risk	**Buffer** 20%
Ex-ante estimated net greenhouse gas emissions reductions	**Total over crediting period:** 20,166,722 tCO_2e **Annual average:** 672,224 tCO_2e. **Annual average per ha:** 4.01 tCO_2e
Monitoring of carbon stock changes and emissions	**Parameters** ▪ i. Parameters associated with carbon content of the forest, including rate of deforestation and changes in LULC ▪ ii. Parameters associated with farming activity within the leakage buffer ▪ iii. Parameters associated with natural disturbances ▪ iv. Parameters associated with methane emissions from livestock, and assisted natural regeneration **Methods** ▪ i. Remote sensing, permanent plots ▪ ii. Suite of monitoring strategies ▪ iii. Not described ▪ iv. Not described **Frequency** ▪ i. Every monitoring period (deforestation rates – annually) ▪ ii. Not described ▪ iii. Not described ▪ iv. Annually

Stakeholder identification and engagement

Stakeholders identified	*Note: Social and Biodiversity Impact Assessment Manual for REDD+ Projects (Richards and Panfil, 2011) used to measure social and biodiversity impacts of the project* Communities in the Project Zone (including subgroups such as women); Local government officials; Minister of Environment; Yangambi Agricultural Research Center; Busira Palm Oil Plantation
Identification process	The Jadora Leadership Team identifies stakeholders based on who can provide valuable feedback or advice in

		conducting the project, and what groups of people will be affected by the project over its lifetime.
Full and effective participation		
	**Access to information and consultation**	▪ After identifying stakeholders, Jadora develops a strategy for engaging each stakeholder based on how Jadora expects these groups to participate. For example, the involvement process is much different for communities in the project zone than for government officials. ▪ Community Consultation Team visited the 21 identified major and minor villages in and around the project area. Meetings were announced by posting fliers at the houses of villages chiefs and local schools and churches, as well as on the local radio station. Meetings are conducted in Lingala, the dominant local language ▪ Project was implemented according to free prior informed consent principles ▪ After design completed, Jadora continued meetings with villages to solicit participation. ▪ The Community Consultation Team is publicizing the comment period by visiting villages in the project zone and distributing copies of the summaries.
	Participation in design and implementation	▪ Meetings with communities identified their concerns and these were documented and incorporated into project design. ▪ After design completed, Jadora continued meetings with villages to solicit participation. ▪ Jadora continues to consult with communities on when, where, and how project activities will be implemented. ▪ As internet is unavailable throughout the project area, villagers told they may use the internet at the base camp to access documents and translators will assist them in uploading their comments on the PDD. ▪ Communities participate in project activities, including signing conservation agreements. ▪ On land use planning, Jadora uses a hybrid approach that encourages participation of under-represented groups such as women and youth along with village leaders, while leaving implementation of the plans to chiefs and village elders.
	Feedback and grievance redress procedures	Jadora provides a translated summary of its grievance process, and has posted the process at its base camp.
	Worker relations and safety	Following the methodology of the International Labor Office, risk is assessed for potential hazards associated with all project activities. The project's Worker Safety Risk Analysis document and risk assessments are made

		available to all staff members. Basic emergency medical training to be conducted by a local medical professional. Jadora trains all new workers on their rights outlined by the Labor Code within the Worker's Training Handbook. Jadora will ensure that the Isangi REDD+ Project is in compliance with all existing and future laws and regulations regarding worker's rights.
Communities		
	**Without-project scenario**	Project is currently collecting data for social impact assessment using Social and Biodiversity Impact Assessment (SBIA) Manual for REDD+ Projects (Richards & Panfil, 2011) and Social Carbon Methodology (SCM) protocols and focuses on the Sustainable Livelihoods Framework (SLF). ▪ Low income and standards of health and education. ▪ Lack of access to resources from the government, and of a lack of opportunity for gainful employment.
	With-project scenario	**Expected net benefits** ▪ Increased access to, relevance, and quality of education ▪ Improved quality of life ▪ Resources and ecosystem services valuable to communities maintained ▪ Communities able to maintain traditional, cultural, spiritual, and religious identities **Possible negative impacts on other stakeholders and mitigation strategy** No negative offsite stakeholder impacts are identified
	Impact monitoring	**Indicators** Five dimensions of sustainable livelihoods framework **Methodologies** Surveys in households, at markets and paths to markets, and in health clinics. **Frequency** The Community Consultation Team conducts annual surveys on how the project affects individuals in the project zone and to solicit feedback from community members using the sustainable livelihoods framework. Monitoring of communities will be on a regular, informal basis, overseen by the community consultation manager
Biodiversity and ecosystem services		
	**Without–project scenario**	A baseline study of faunal diversity within the project area is in progress. ▪ Lack of permanent farmland, low fertility soils and the threat of livestock disease outbreaks would lead to high hunting pressure on forest fauna for protein. ▪ Eventual rapid deforestation, habitat loss, and habitat

	isolation.
With-project scenario	**Expected net benefits** Net positive impact on faunal biodiversity within the project area due to avoided deforestation and degradation **Possible negative offsite impacts and mitigation strategy** Leakage hunting is a possible negative offset impact. This will be mitigated by benefits from the aquaculture program which will reduce the need for hunting.
Impact monitoring	**Indicators** Faunal biodiversity: animal tracks, signs and scat, the actual presence of animals within a specific area, number of observed snares and traps, bush meat trade, CITES-listed species. Change in intact forest will be used as a proxy for floral diversity and for biodiversity in general. **Methodologies** A baseline study of faunal diversity within the project area is in progress. **Frequency** Periodic

Progress

Validation	VCS validation report issue date: 19 September 2014 CCBA validation report issue date: 19 September 2014 (Combined VCS, CCBA PDD template used)
Verification	VCS verification period and report issue date: \ September 12, 2009 through December 31, 2013; 18 December 2014 CCBA verification period and report issue date: September 12, 2009 through December 31, 2013; 18 December 2014 (Verified against VCS and CCBA in a single verification)
Credits issued	Number: 112,000 As of: 21 Feburary 2016

Further information

- VCS Project Database:
  https://vcsprojectdatabase2.apx.com/myModule/Interactive.asp?Tab=Projects&a=2&i=1359&lat=0%2E110625&lon=23%2E939788&bp=1
- CCBA Projects
  http://www.climate-standards.org/?s=Isangi

Documents reviewed

VCS and CCBA project design document, validation report and verification report