



Darwin Initiative Main Project Half Year Report (due 31 October 2016)

Project Ref No	22-013
Project Title	Conserving pine woodland biodiversity in Belize through community fire management
Country(ies)/Territory(ies)	Belize, UK
Lead Organisation	Toledo Institute for Development and Environment (TIDE), University of Edinburgh (UoE)
Partner(s)	University of Belize Environmental Research Institute (ERI), Government of Belize Forest Department, International Institute for Environment and Development (IIED)
Project Leader	Dr Neil Stuart (UoE) and Mario Muschamp (TIDE)
Report date and number	HYR2
Project website:	http://www.darwininitiative.org.uk/project/22013/
Blogs:	http://www.iied.org/flaming-parrots-palmetto-palms http://www.iied.org/community-forest-farm-business-training-under-way-belize
Funder (DFID/Defra)	DFID

1. Outline progress over the last 6 months (April – Sept) against the agreed baseline timetable for the project (if your project has started less than 6 months ago, please report on the period since start up to end September).

SUMMARY OF PROGRESS OF OUTPUTS AGAINST TIMETABLE FOR YEAR 2 and EOP

Output 1: Establish Biodiversity Monitoring (baseline + monitoring)

Scheduled to complete by: end of year 1.

Indicator 1.1 publication of all monitoring protocols

Indicator 1.2 production of baseline biodiversity data for PCNP

Indicator 1.3 monitoring plots set up for Caribbean Pine and Palmetto

Progress: all protocols completed by end of year 1; report on baseline biodiversity surveys completed by 18 months; all monitoring plots for pine and palmetto set up by 18 months.

Status: output completed.

Output 2: Training in a) fire management and b) biodiversity monitoring

Scheduled to complete by: end of year 2;

Indicator 2.1 up to 30 Belizeans trained in monitoring wildlife and fire effects on vegetation; 6 initial staff trained in fire effects monitoring during set up of plots in August 2016;

Progress: Fire Effects Monitoring Training Course scheduled for year 2, January 2018.

Indicator 2.2 up to 15 Belizeans capable of giving training in safe use of agricultural fire.

Progress: Burn Boss training course scheduled for February.

Status: output 2 has been planned and is expected to complete by end of year 2.

Output 3: Community members trained in fire management

Scheduled to complete by: end of year 2.

Indicator 3.1 50 members trained in fire management and 50 in safe agricultural burns.

Progress: 62 members trained to date. 40 members scheduled for training in January 2017.
Status: on course for completion by end of year 2.

Output 4: Palmetto harvesting assessed and used in discussions with FD in year 2 with a view to securing agreements about local access by EoP.

Indicator: 4.1 report on palmetto harvesting by five buffer communities produced by 18 months;
Progress: Report completed 18 months. Next discussions with FD planned for January 2017.
Status: survey completed and reported; discussions progressing as scheduled;

Output 5: Plan for a sustainable extraction zone for PCNP to be produced.

Indicator: 5.1 Plan produced and used by TIDE to evaluate feasibility of the zone by EoP.

Progress: External consultant (Dr Rick Anderson) to lead reporting appointed at 18 months.

Status: Started/on schedule (data collection in years 2+3 – report production will be in year 3)

Output 6: Business ideas identified, groups trained and plans developed for most promising

Indicator 6.1: Up to 3 business plans produced for community groups by EoP.

Progress: Six leaders take part in exchange programme in Feb 2016; Six groups identified from 5 communities; first round business training delivered August 2016, follow-up activities in progress now with a second round of training scheduled for January 2017.

Status: on/ahead of schedule, to allow more time for business plan development in year 3.

SUMMARY OF PROJECT-WIDE CO-ORDINATION AND DISSEMINATION ACTIVITIES

There has been regular communication between project partners by email and skype during the last six months. In August, the latest round of progress monitoring meetings were held in Belize and attended by all project staff. A planning meeting with staff from the ERI was held on the 25/08/2016 to discuss plans for the training of NGO staff in biodiversity monitoring that the ERI are scheduled to deliver in the next 6 months. Project staff from TIDE and UoE met on 30/08/2016 for a project monitoring meeting and planned activities for the next 6 month period. A meeting was also held between project staff and staff from the Belize Forest Department on the same date. TIDE and FD agreed to have further consultation meetings in the next few months to progress discussions about palmetto harvesting rights and fire governance. We communicate regularly with other related projects, such as the Fire Management Program of the NGO Ya'axche (<http://www.yaaxche.org/>) and the Government of Belize's Key Biodiversity Areas (KBA) Project <http://protectedareas.gov.bz/kbaproject/> which also seeks to encourage some of the same villages (Trio, Bladen) to develop local enterprises. Our most recent information sharing meeting with the KBA project lead, Eugene Waight was on 8th September 2016. Our staff meet with Stephanie Smith, Fire Management Officer at Ya'axche approximately once a month as part of regular liaison meetings between TIDE and Ya'axche in Punta Gorda, where both organisations are based. Other consultations are described below under the specific activities.

Dissemination of the project is taking place through many channels, including briefings to the British High Commission in Belize and the Belizean High Commission in the UK, presentations to the annual meetings of the UK-Belize Association <http://www.ukbelizeassociation.org/> via radio broadcasts on LOVE FM (the most popular station in Belize), through a series of popular blogs on the IIED website (URLS above) and on TIDEs institutional website <http://www.tidebelize.org/project/terrestrial/darwin-initiative-community-fire-management-project> Project staff attended a series of events from 22-26/8 leading up to a presentation about the project on Friday 26th August at the XX International Meso-American Biodiversity Congress, <https://www.facebook.com/MSBCBelize/> which was this year held in Belize.

A new data management system for project data has been created by our two GIS interns who began work at TIDE on 1st July, Allana Barillas from Belize, and Jenny Chambers from Edinburgh.



Project staff publicise the Darwin project at the XX Meso-American Biodiversity Congress. From left: Cathy Smith (project officer), Mario Muschamp (TIDE project lead), Rick Anderson (fire consultant, Everglades NP), Allana Barillas (Darwin intern), Jenny Chambers (Darwin intern) and Neil Stuart (UoE project Lead). To right: Mario Muschamp presents the project.

DETAILS OF ACTIVITIES AS EVIDENCE OF PROGRESS TOWARDS EACH OUTPUT

Output 1: Biodiversity and woodland resource baselines and monitoring:

Activity 1.2 Establish permanent monitoring plots for pine in Payne’s Creek National Park (PCNP)

12 permanent fire-effects monitoring plots were set up in April 2016 in pine dominated areas in PCNP, with assistance from 6 community members employed for the purpose. The locations and diameters of all pines were measured and mapped and points for photo-monitoring were established. The plots were revisited in August and a next round of photos taken, following fires in some areas. All tree diameters were re-measured and verified on this second visit, and locations of all trees were recorded using GPS, allowing them to be mapped in GIS.



Data collection in a pine monitoring plot in PCNP

Activity 1.3 Assess palmetto productivity and abundance

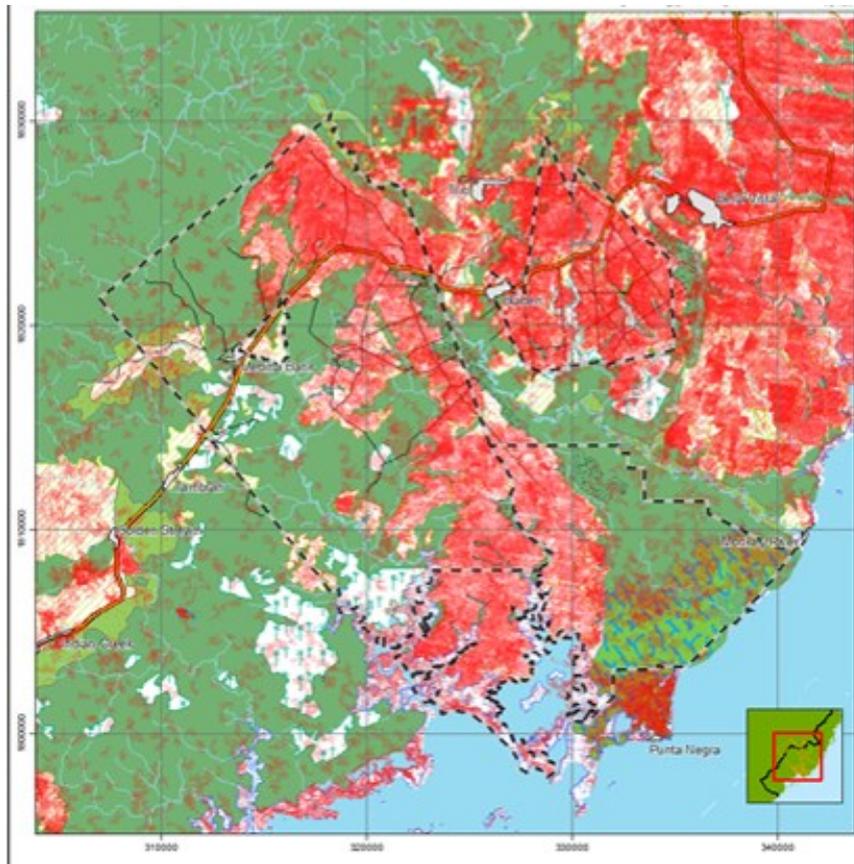
Palmetto locations, and inflorescence were recorded within all 16 plots in PCNP. An additional 8 plots for monitoring palmetto were set up in Deep River Forest Reserve (DRFR) and 8 more in SBFR (Swasey-Bladen Forest Reserve) in May 2016. These plots were revisited in August to estimate and record seed production, and the boundaries of the palmetto clumps were positioned using GPS for subsequent mapping in GIS. Maps showing the locations of the pine and the palmetto plots are presented in annexe 1, and data from the first year of monitoring in the plots are in annexes 1a, 1b and 1c.

Activity 1.6 Establish biodiversity and wildfire baselines

A biodiversity baseline report for PCNP was finalised based upon data collected from previous regular census monitoring of permanent transects by the protected area rangers between 2009 and 2012. (The full report is available in annexe 2).

An analysis of wildfire frequency was completed as a master’s dissertation at UoE using burn

information derived from the Landsat data archive. The main outputs were maps showing inter-annual fire frequency between 2006 and 2016, and the year in which each area last burnt. The analysis showed a greater proportion of the savanna component of SBFR burning annually (average 42%) compared to savannas in PCNP or DRFR (average 31%, 32% respectively). This helps to confirm anecdotal evidence that the areas receiving active fire management have less extensive and less frequent wildfires and establishes a baseline against which changes in fire extent and frequency may be assessed in future. Details of the methods and results including the mapping are available at <http://www.geos.ed.ac.uk/~mscgis/15-16/s0568630/>



*Inter-annual frequency
of fire in Toledo
District (2006-2015)*

*Intensity of red colour
increases with fire
frequency*

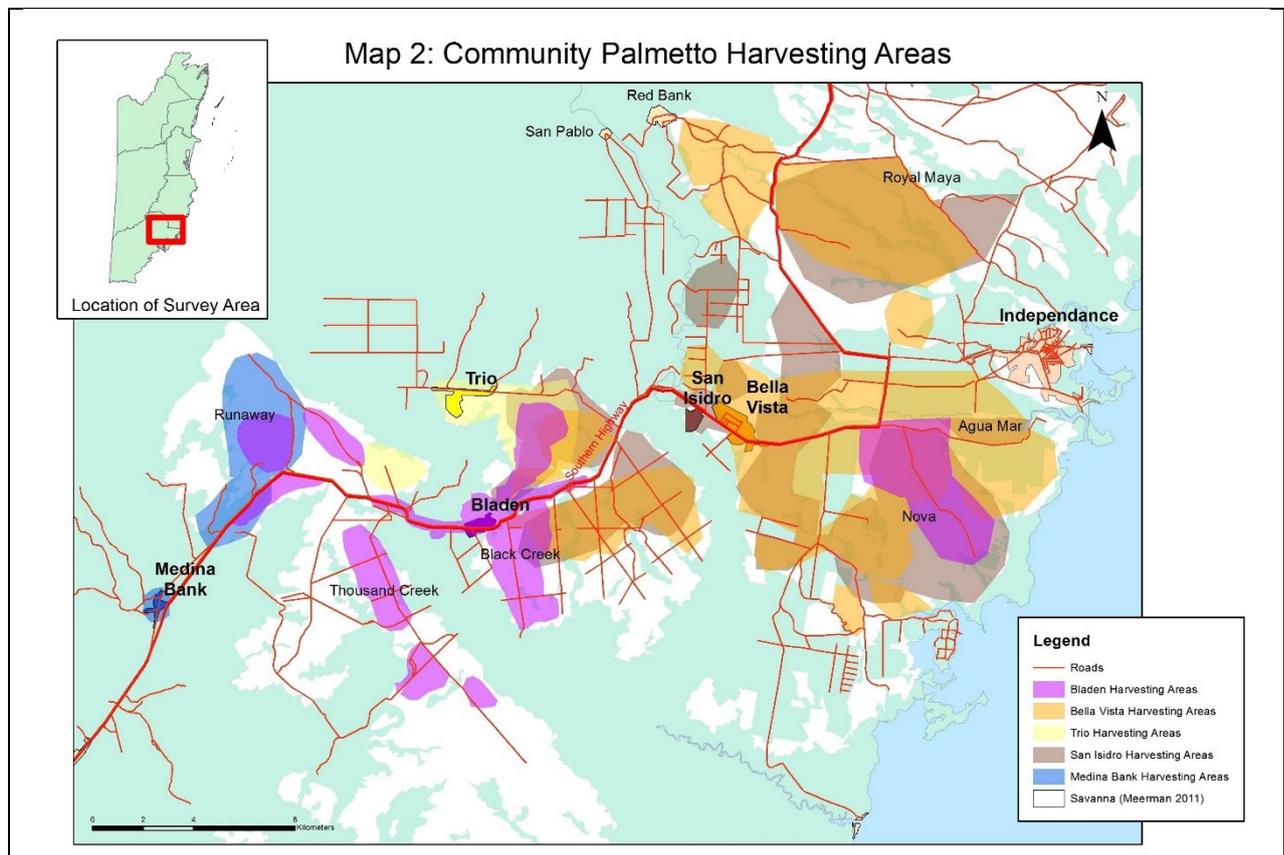
*Protected area
boundaries shown by
black/white lines.*

Source: Roper, 2016

Output 4: Securing the palmetto harvest:

Activity 3.3 Consultation and survey with community palmetto harvesters

A survey of 77 palmetto harvesters was conducted in August. The aims of the survey were to better understand the logistics and locations of harvesting and sale, and community perceptions of the resource, in order to determine how best to protect the harvest against the effects of wildfire by appropriate timing of prescribed burning and how to support the palmetto harvesters through the project's associated livelihood development activities. The survey was preceded by discussion with community leaders at meetings in Bladen on 31/07 and 14/08, San Isidro on 13/08, Trio on 20/08 and Medina Bank on 21/08, at which the local names for rivers and roads, and estimated harvesting areas were discussed. This allowed an appropriately labelled and scaled base map to be produced for each community, which was then used in the surveys to map areas used by each harvester. The survey results and a map, collated in GIS, showing areas used by each community were finished in September. The next step will be to use these as a basis for discussion between the Belize Forest Department and the communities, about what form their rights to access and harvest this resource might take.



Map of areas used by each of the five communities to harvest palmetto (full report in Annexe 3)

Output 6: Business plan development for small locally controlled forest enterprises (SFEs)

Activity 3.5 Meetings with community groups to assess interest in developing SFEs

Through existing connections between IIED and the Forest and Farm Facility of the FAO, we were able to add an additional preparatory activity to this work package. IIED levered additional resource which allowed 5 community members and two project staff (Smith, Requena) to take part in a regional exchange from 11th-15th April 2016 between representatives from locally-controlled forest businesses from across Central America. The exchange was hosted by a federation of cooperatives, FEDECOVERA in Coban, Guatemala. The participants were able to visit a variety of successful community-run businesses, and hear the experiences of other small businesses in organisation, marketing, finance and political representation.



Visiting a coffee cooperative in Guatemala

Following the exchange, the participants presented their experiences in each of their communities: Bladen on 24/04, Medina Bank on 24/04, San Isidro on 03/05 and Trio on 15/05.

At these meetings we also gave information of further training and support to be offered by the project to help each community to develop a business idea and invited discussion of which groups might usefully take this training. The groups were finalised in further meetings held in: Bladen on 31/07 and 14/08, San Isidro on 13/08, Trio on 20/08 and Medina Bank on 21/08.



*Meeting in Bladen
24 April 2016 when the
village representative
shared his experiences
of the Exchange Visit
to Guatemala with the
rest of his community*

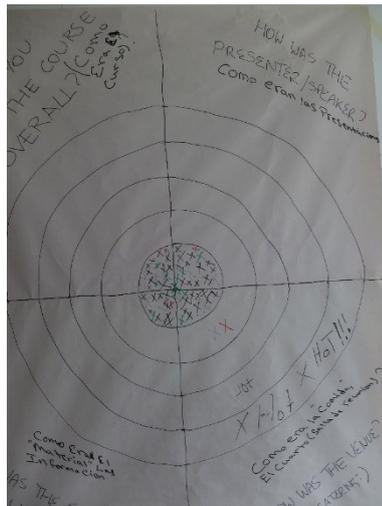
Activity 3.6 Develop business plans with community groups

To begin this process, IIED led a 3-day introduction to group business for 6 community groups (14 women and 14 men) from 1st-3rd September 2016. The groups trained named themselves the Bladen Palmetto Enterprise, the San Isidro Farmers Agro-Association, the Trio Maya Mountains Tilapia Growers, the Bella Vista Pure Coconut Business, Protectors of the Last Corridor Adventure Tours from Medina Bank and the San Isidro Kekchi Cuisine Restaurant. Some of these groups pre-existed and some were new enterprises. The training covered the benefits of group business, structure of a business, marketing a product and an introduction to accounting (annexe 4 gives an overview of the course). The groups had to apply concepts to their own business ideas, and a series of activities left them with the notes that will form the first elements of a business plan. Feedback from the training was extremely positive from all groups.

Follow-up meetings were held with each group in their communities on 7/09 to discuss how TIDE could support the groups before they receive further training to draft business plans in January 2017. Activities requested by the groups, which have now been planned, include visits to successful local businesses, further accountancy training, support with registering as a group and technical support in use of IT. We also plan to contact a previous buyer of palmetto from this area, who did not buy this year, in order to understand if there is likely to be a local buyer for palmetto seed in future years. Annexe 5 summarises follow up activities requested of TIDE.



Women from the proposed Kekchi Cuisine Restaurant recognise what additional information they will need to obtain before they can formulate their business plan.



All the participants in the 3 day community business training course given by our partner IED recorded very high satisfaction with all aspects of the course (a bullseye hit!)

For a fuller description of this year's business training activities and reflections on this process, please refer to the blog by Duncan Macqueen <http://www.iied.org/community-forest-farm-business-training-under-way-belize>

Supporting Documents

The following documents are provided online as annexes to this report:

- Annexe 1: Maps of Permanent Plot monitoring locations for pine and palmetto.
 - 1a: Palmetto plots: observed inflorescence, flowering & seeding May-Sep 2016.
 - 1b: Pine Plots 1-12: observations from April 2016.
 - 1c: Pine Plots 1-12: observations from August 2016.
- Annexe 2: Results of 2009-2012 Biodiversity Baseline Monitoring Surveys.
- Annexe 3: Report on Palmetto Berry Harvesting in Belize's Toledo District.
- Annexe 4: Community Business Training – Course Overview.
- Annexe 5: Community Business Training Follow up Activities by TIDE.

The documents are in a folder accessible through the following URL
https://drive.google.com/drive/folders/0B_6EQ1kyTh6xMkRiZXJ2enM5Ulk?usp=sharing

2a. Give details of any notable problems or unexpected developments/lessons learnt that the project has encountered over the last 6 months. Explain what impact these could have on the project and whether the changes will affect the budget and timetable of project activities.

Having recognised the need to modify some of the project activities and had these approved by the sponsor through the appropriate change request form last year, we believe the project is now making good progress against the revised activities and outputs.

The unexpected outcome of the UK Referendum on membership of the EU has led to a further decline in the value of sterling against the USD. Since the start of the project (when the exchange rate was £1 = 1.5 \$USD) we are now achieving \$1.15 per pound at best. As the Belize dollar is linked to the US Dollar, all in-country costs including all partner salary costs, have increased by almost one third in real terms since start of project. We have committed to guarantee all salary payments, but we are regularly reviewing with partners ways we can make efficiencies on both UK and overseas budgets, with the least negative impact on project activities and outcome.

2b. Have any of these issues been discussed with LTS International and if so, have changes been made to the original agreement?

Discussed with LTS:	Yes – last year
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Formal change request submitted:	Yes - last year
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Received confirmation of change acceptance	Yes - last year
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3a. Do you currently expect to have any significant (e.g., more than £5,000) underspend in your budget for this year?

Yes No Estimated underspend: £

3b. If yes, then you need to consider your project budget needs carefully. Please remember that any funds agreed for this financial year are only available to the project in this financial year.

If you anticipate a significant underspend because of justifiable changes within the project please submit a rebudget Change Request as soon as possible. There is no guarantee that Defra will agree a rebudget so please ensure you have enough time to make appropriate changes if necessary.

4. Are there any other issues you wish to raise relating to the project or to Darwin's management, monitoring, or financial procedures?

No

If you were asked to provide a response to this year's annual report review with your next half year report, please attach your response to this document.

Please note: Any planned modifications to your project schedule/workplan can be discussed in this report but **should also** be raised with LTS International through a Change Request.

Please send your **completed report by email** to Eilidh Young at Darwin-Projects@ltsi.co.uk . The report should be between 2-3 pages maximum. **Please state your project reference number in the header of your email message e.g., Subject: 22-035 Darwin Half Year Report**