

**Newsletter 5: January 2016** [p4ges](#) is a three year project involving a consortium of eleven institutions in the UK, Madagascar, the USA, the Netherlands and Switzerland. Our aim is to influence the development and implementation of international ecosystem service payment schemes in the interests of poverty alleviation. The project is focused in the eastern rainforests of Madagascar in a REDD+ pilot project known as the Corridor Ankeniheny Zahamena. p4ges is funded by [espa](#) (Ecosystem Services for Poverty Alleviation). This document is a brief update aimed at our national and international advisory committees to keep them informed of the project's progress. Regular updates are also posted on our [website](#).

### **Progress in research activities**

**Landscape scale fieldwork on carbon, biodiversity, hydrology and wild harvested products:** The field work is complete and the intensive phase of lab work and sorting, cleaning and analysing data is underway. Some preliminary analysis is complete and Alison Cameron presented 'Digging down to understand deforestation impacts on ecosystem services from soil' at the espa science conference on behalf of the wider p4ges team. You can watch the presentation [here](#).

**Intense plot-scale hydrological work:** After a full year of intensive study in the instrumented plots, these were dismantled in December. The data is being analysed. The work at the instrumented catchment (which was studied initially by French researchers in the 1970s and which the p4ges team have reinstrumented) will continue till the end of the wet season when the team will have a full year of data.



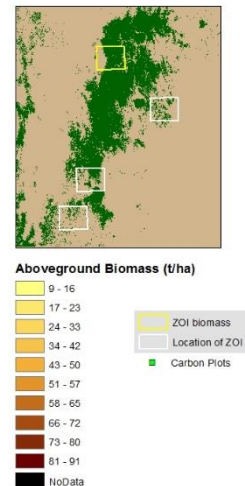
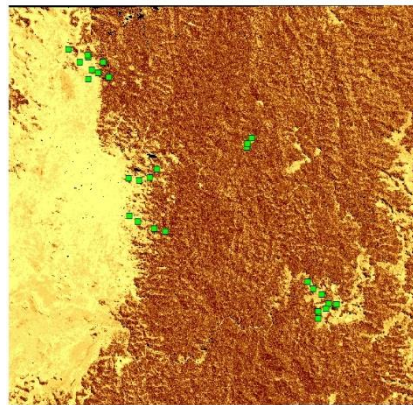
**In depth socio-economic research:** The intense field work aiming to quantify the opportunity cost of conservation restrictions in our four carefully selected 'in-depth' sites is complete. Some data has been analysed (see below) while other analysis are ongoing.

**The 'benefit survey' and transaction cost work:** Analysis of the large data base of micro-projects implemented in CAZ and the transaction costs of delivering such projects through different approaches is complete. Our field team looking at the experience of local people who were 'beneficiaries' of a range of micro projects is coming to a close. Data will be cleaned and analysed over the next few months.

**Remote sensing and modelling:** At our project wide meeting in September, we agreed on scenarios to use for modelling future changes in ecosystem services (particularly carbon storage and hydrological services). These are: 1) Business as usual deforestation. 2) Effective conservation plus REDD+ 3) Poverty reduction investment in infrastructure (connecting major towns along existing

tracks-which cuts CAZ in half and leads to deforestation). 4) Sustainable agricultural intensification (resulting in concentration of people in low land suitable for agriculture). Modelling work is now in full swing.

The carbon team have used data from the field work to model above ground biomass (see image to right).

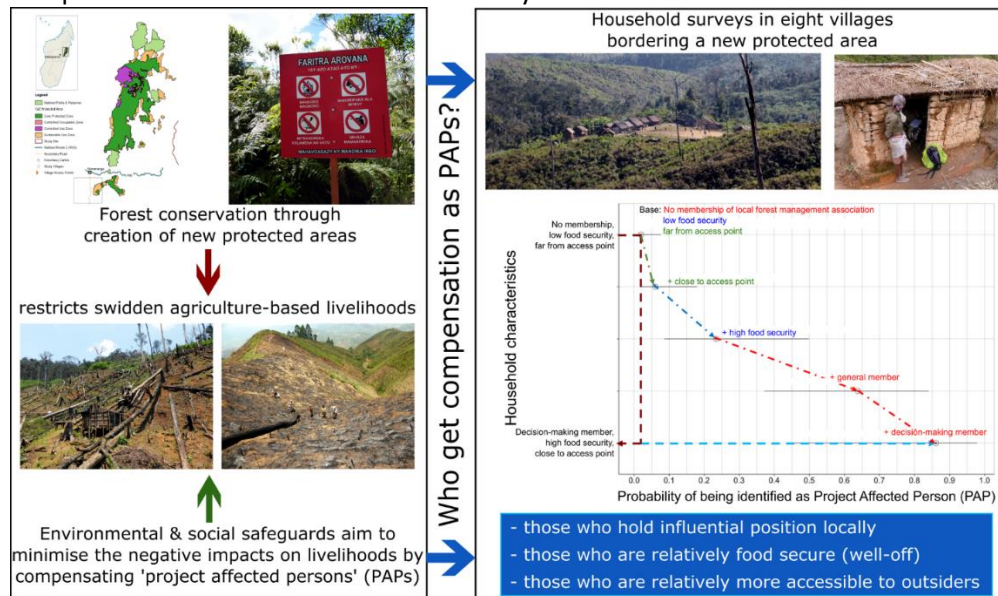


**Research results: highlights**

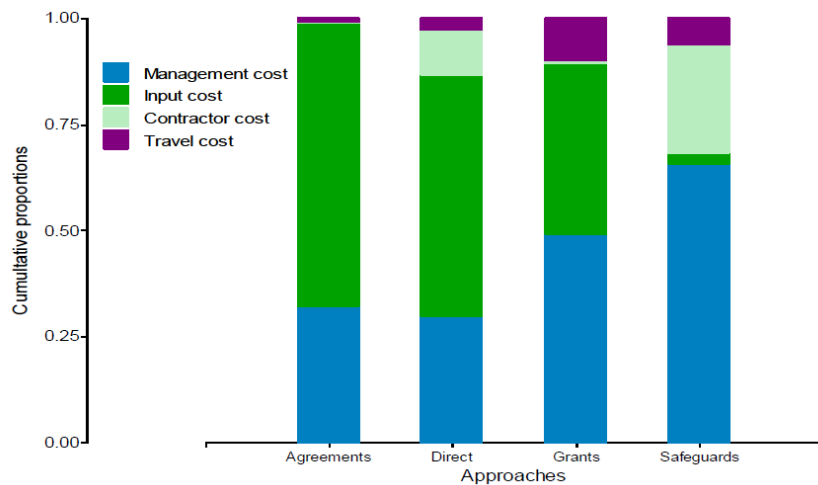
As the project progresses more of our results are being presented at international conferences and submitted for publication. In following newsletters we will no longer update on the progress of data collection but will focus on research results and impact-related activities. In this newsletter we highlight three pieces of work

**Can REDD+ social safeguards reach the ‘right’ people? Lessons from Madagascar.** Mahesh Poudyal, Bruno S. Ramamonjisoa, Neal Hockley, O. Sarobidy Rakotonarivo, James M. Gibbons, Rina Mandimbiniaïn, Alexandra Rasoamanana, Julia P. G. Jones. (Published in [Global Environmental Change](#)). The research was covered in the [BBC website](#) and [here](#) and [here](#).

Our research looking at the implementation of social safeguards around the CAZ REDD+ pilot project has been accepted for publication. The research shows that the development activities which are meant to compensate for the impacts of conservation on local livelihoods have suffered a degree of local elite capture, and are biased against those households that are difficult to reach. We make the point that this would be very difficult to avoid in the local context of poor information on the location of households, difficult access and unwillingness of households dependent on banned livelihood activities to self-identify. The Paris Agreement in December 2015 recognised REDD+ as a key policy instrument for climate change mitigation and explicitly recognised the need to respect human rights in all climate actions. This research shows that existing safeguard commitments are not always being fulfilled and business as usual should not continue. We suggest that process of requiring so called ‘project affected persons’ to be individually identified and compensated is unrealistic and blanket compensation in affected communities may be more effective and efficient.



**Costs of delivering benefits to local communities as part of REDD+ programs: an analysis from Madagascar.** James MacKinnon, Luciano Andriamaro, Andoniaina Mialisoa Rambeloson, Mialy Razafindrazakaso, Celia A. Harvey (presented at Forests & Livelihoods: Assessment, Research, and



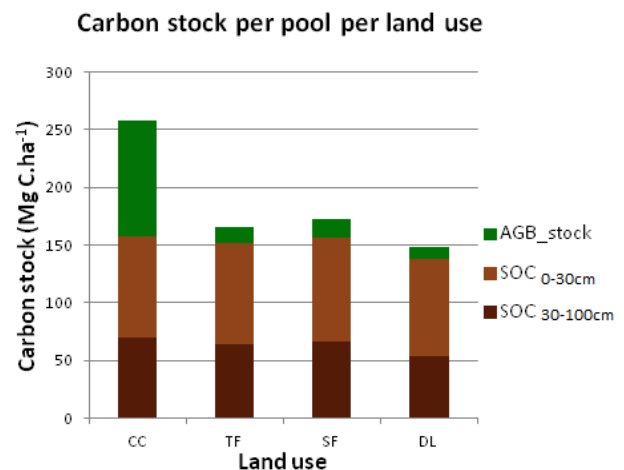
Engagement [FLARE] conference in Paris, December 2015).

For REDD+ schemes to be successful they must include activities that improve the livelihoods of local communities. Pilot initiatives typically include the implementation of small scale livelihood projects. There is a need to ensure these are effective and provide benefits without large transaction costs but

there is little information on the best way to deliver such livelihood projects and the relative costs of different approaches. Our team brought together a database of 463 micro projects which have been delivered through four main approaches (direct implementation, conditional conservation agreements, small grants and safeguard projects) and reviewed the relative costs of delivering local livelihood projects through these approaches. We found that safeguards have higher management and contractor costs than other approaches which projects delivered through agreements, direct implementation and grants had greater input costs.

**Improving aboveground and soil carbon storage assessment under preserved forested area in Madagascar to address climate change: case of Ankeniheny-Zahamena Corridor (CAZ).** Nantenaina Ramboatiana, Andry Andriamananjara, Andrisoa Riana Hary, Tiana Saneho, Tantely Razafimbelo, Marie Paule Razafimanantsoa, Andriambolantsoa Rasolohery, Jenny Hewson, Nandrianina Ramifehiarivo, Nantenaina Rabetokotany, Tahiana Ramananantoandro, Andriambelo R. Razafimahatratra, Gabrielle Rajoelison, Lilia Rabeharisoa, Eustache Miasa, Herintsitohaina Razakamanarivo ((i) presented at the World Forestry Congress in [Durban/WFC September 2015](#) ; (ii) posted at the [ESPA annual conference](#) meeting in London/November 2015 ; (iii) displayed also during the CoP 21 in Paris/December 2015)

Accurate carbon storage accounting (considering all carbon pools) in forest and deforested lands and also a good understanding of their variability are among requirements for effective REDD+ implementation. However information about the variability and the carbon sequestration in different land uses following deforestation is limited. We have carried out surveys in CAZ which integrated biomass (aboveground AGB) and soil organic carbon in top (SOC<sub>0-30cm</sub>) and deeper soil (SOC<sub>30-100cm</sub>). The carbon accounting was done in four land uses that were representative of the eastern region of Madagascar: closed canopy (CC), tree fallow (TF), shrub fallow (SF) and degraded land (DL). Following the deployment of various activities (remote sensing, field works including forest inventory/other laboratory analysis); results showed that: (i) carbon stock in CC was higher than in DL



(257.59 and 148.26 Mg C.ha<sup>-1</sup> respectively, p-value<0.05) where soil (SOC up to 100 cm depth) could represent more than 80% ; (ii) factors controlling carbon storage variability could be identified (there were land use type and location which affected AGB, it was the altitude which control more the SOC) that might be used for further modelling and developing scenarios on carbon emissions/sequestrations in REDD+ framework. Besides, a blogpost showing these results and highlighting mainly on the importance of surveying underground carbon pool was recognized internationally. Actually, this blogpost entitled [“Carbon stock in rainforests: a buried potential”](#) has been selected in the top 5 blogposts, awarded (prize autographed) by IUFRO within the World Forest Congress in Durban.

### **Progress in impact activities**



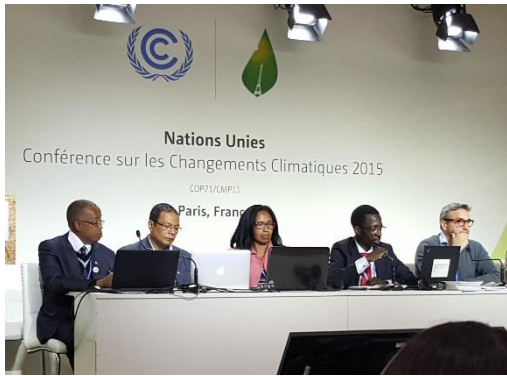
**Relationship with stakeholders at local scale:** In December 2015 we held an open day at our hydrological research site for community leaders and representatives of local schools in the Andasibe commune. This was extremely popular and well attended. Ramahazo Paul (Adjoint Mayor, commune Andasibe) said *“It is fantastic to have the chance to see with our own eyes this research and the equipment and approach they use. We have not had this chance before with other research in the area. This makes it very*

*clear that what happens to the forest and management of land does affect water”*. A [blog](#) and [video](#) explaining what happened at this event are available on the website. Our local assistants in Andasibe are so good at communicating the results of the research we have made [a film](#) where they explain the research aims and what we have found. We have allready shown this film in Andasibe and plan to use it in our broader restitution.

Now that field work is at an end and we are busy preparing for local restitution to ensure that our research results are shared with the people from whom we collected data, who helped with the research and who are the intended ultimate beneficiaries of the research. We have a group within the project led by Alex Rasoamana who are meeting regular to discuss the messages to be delivered locally, prepare materials and arrange the logistics of returning to all the challenging places we have worked.

**Relationships with stakeholders at the national scale:** In the run up to the UNFCCC COP 21 in Paris our team have been working very closely with national stakeholders interested in REDD+ to prepare for Madagascar’s presence at the COP (see below).

P4ges has done a lot of work focused on the social impacts of conservation. In December 2015 we held a [mini conference](#) at the University of Antananarivo to present p4ges research on this subject. We had three excellent presentations followed by a really active round table discussion and debate.



**Relationship with stakeholders at the international level:**

In December 2015 the world’s attention was focused on the climate agreement being discussed in Paris. REDD+ (a major focus of the p4ges project) was a significant issue up for debate and agreement. Four members of the p4ges project: Prof Bruno Ramamonjisoa, Prof Tantely Razafimbelo, Dr. HDR Herinsitohaina Razakamanarivo and Jeannicq Randrianarisoa joined the Malagasy delegation at COP to offer support and advice. Three members of our national advisory committee were also present: Jean Roger

Rakotoarijaona of Office National pour l’Environment, Mamitiana Andriamanjato – the country’s REDD+ focal point and Claudine Ramiarison – Director General of Research. The p4ges team were involved in organizing a side event: “REDD+: at the interface of biodiversity, climate change and human rights” organised by the Malagasy government, AFNU-Aix (French Association for the United Nations) and the IFDD (Francophone Institute for Sustainable Development). The team also presented two posters and fielded questions about the levels of local participation in the REDD+ processes, research on local knowledge in Madagascar among other things.

Madagascar has pledged to reduce its GHG emissions by 14% and increase its carbon sequestration by 32% by 2030 and at COP21 a letter of intent was signed between the World Bank and the Malagasy government which commits the bank to purchasing emissions reduction from the northern part of eastern rain forest of Madagascar including CAZ in a deal worth several tens of millions of dollars. Given the growing significance of REDD+ in Madagascar, the research being conducted by p4ges is particularly timely. Read more [here](#) and [here](#).



Please look at our bilingual [website](#) regularly for updates. If you have any questions about the project please don’t hesitate to get in touch and we will ensure your enquiry goes to the most suitable person ([info@p4ges.org](mailto:info@p4ges.org))