

# TReeS News No.79

## October 2017

The **TReeS** newsletter provides an update for those interested in rainforest related issues in Amazonia, specifically in Madre de Dios, in south-east Peru, and the small-scale projects TReeS supports there.

This edition focuses on the TReeS small grants (*becas*) 2017 awards - a record number were awarded this year - and feedback from past recipients.

There is also news from Madre de Dios on the latest government attempts to control illegal gold-mining causing deforestation, the challenges faced by an indigenous community, the impacts of climate change and indigenous participation in COP21, in Paris.

### TReeS small grants (*Becas*) program

The small grants programme is an important contribution to the career development of young Peruvian scientists who will, potentially, be researching, working in and promoting Amazonia for decades to come. TReeS funding assists them in gaining all important field work skills that allow them to complete their University studies and may also enable them, subsequently, to join other field research projects and conservation organisations. Over **60 grants** have been awarded over the last 10 years.

Only one grant was awarded in 2016 so last Autumn TReeS actively contacted those University departments from which most applicants have been received in the past. Consequently, a record number of fourteen applications were received this year and a **record number of eight grants were awarded**.

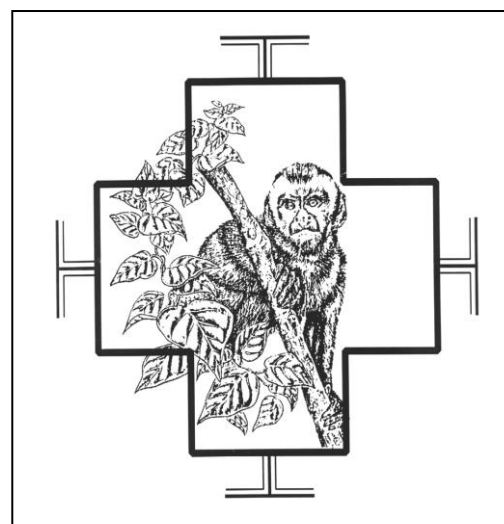
**Appeal: £25+** donations towards the **2018 grants programme**.

**TReeS members support is hugely important in maintaining this programme.** In addition, the grants TReeS can offer as well as funding for other projects has been badly affected by the dramatic fall in the rate of exchange since the Brexit vote.

### TReeS small grants (*becas*) 2017 awards

**\*Betsy Munoz** (UNALM): '*Capacidad de regeneración natural de la flora en áreas degradadas por minería aurífera aluvial en diferentes estadios en la región La Pampa, Madre de Dios*' – will investigate the ability of flora to regenerate in areas at different stages of degradation as a result of illegal gold-mining, in the La Pampa area.

**\*Daniela Olivera** (UNSAAC): '*Determinación de línea base de avifauna en el centro poblado de Sarayacu, distrito de Iñambari*' – will investigate the ornithology in and around the community of Sarayacu, in the less studied Iñambari region which could help to determine the areas potential for bird-watching related tourism.



### TReeS small grants 2017 awards continued

**\*Karen Portocarrero** (UNAP): '*Ectoparásitos en Potamorhina latior 'yahuarachi' del Rio Tambopata*' – will study the presence and impact of ectoparasites such as fleas on the fish species 'yahuarachi' (*Potamorhina latior*) in the river Tambopata.

**\*Jessica Villanueva** (UNMSM): '*Composición y estructura de la comunidad de dípteros (Insecta) de la cuenca del Rio Tambopata*' – will investigate the composition and structure of various fly species (*dipteros*) at sites across the Tambopata river basin.

**\*Alejandro Portillo** (UNSAAC): '*Variación en la estructura de las comunidades de murciélagos por efecto de la minería informal en la Reserva Nacional Tambopata*' – will investigate bat communities and the impact of informal gold-mining on them.

**\*Sergio Goizeder** (UNSAAC): '*Diversidad de clase chiroptera en la zona de influencia del MLC*' – will investigate the variety of bat species found in the vicinity of the Manu Learning centre, in the upper Madre de Dios.

**\*Juan Gallegos** (UNSAAC): '*El potencial del aviturismo o birdwatching en la comunidad nativa Boca Paríamanu, Madre de Dios – una evaluación biológica, cultural y turística*' – will investigate the bird-watching options in the native community of Paríamanu and the cultural and tourist possibilities this could offer the community.

**\*Alex Cusiynca** (UNSAAC): '*Estrategias y expectativas de vida de jóvenes indígenas en un contexto de actividad extractiva informal/ilegal: el caso de la comunidad nativa de Tres islas*' – will investigate the life experiences and future prospects for young people in the native community of Tres Islas, a community that relies on extractive activities. (See article about Tres Islas on page 6)

UNAMAD: University of Madre de Dios, P.Maldonado.

UNMSM: University of San Marcos, Lima.

UNALM: University of La Molina, Lima.

UNAP: Universidad 'Alas' Peruanas.

UNSAAC: University of San Antonio de Abad, Cusco.

**\*Reforestation Project & Casa Miraflores** – updates in the next Newsletter.

### **TReeS small grants recipient feedback**

**\*Sherrill Castillo** (UNAMAD) (2015) – chose to investigate the potential of flour made from the *Copazú* (*Theobroma grandiflorum*) seed as a food additive in the ‘farming’ of young *paco* fish (*Piaractus brachipomus*). *Paco* are an important protein source for local people, especially with the risk of mercury contamination from fish caught in local rivers and lakes.

The study was based at the IIAP (*Instituto de investigaciones de la Amazonia Peruana*) centre, 20kms from P.Maldonado along the Inter-oceanic highway. It involved looking at 180 fish divided in to four groups. The flour was added to the diet of each group in different amounts: 5%, 10% and 15%, with the final group a control group (0%). They were fed twice a day for 90 days while the water quality was monitored for temperature, dissolved oxygen, pH and conductivity.

The results suggest a slight size and weight gain by the fish fed with *copazú* seed flour. On this basis, it seems to be a worthwhile addition to the *paco* diet.



*Dried Copazu seeds* © S.Castillo



*Young paco* © S.Castillo



*A fish pond is refilled* © S.Castillo

**\*Juan Alva** (UNMSM) (2015) – studied social conditions in three Harakmbut communities - Puerto Luz, Barranco Chico & San Jose de Karene - located in the Amarakaeri Communal Reserve (RCA), in central Madre de Dios, with a focus on the gold-mining impacts and forest conservation. The eastern half of the community of San Jose de Karene (pop. 273), and the eastern fringes of Puerto Luz (pop.277) have been overrun by gold-mining.

His research, which follows up on work undertaken by Andrew Gray & Thomas Moore in the 1970s and 1980s, shows that the system of mining concessions leads to a breakdown in the traditional communal nature of native communities and societies and puts families in conflict with each other within communities as they look to secure their own mining concessions. Mining concessions don't respect titled native community lands nor the extensive traditional lands used for resource gathering outside titled areas.

Furthermore, the regulation of mining requires the payment of an annual license fee which many cannot afford to pay. This either leads to outsiders invading their lands or communities/individuals making poor agreements with outsiders who use exploitative approaches. Some families have become more adept at dealing with outsiders which creates further conflicts and inequalities within communities.

Unfortunately, greater wealth has led to increased alcohol consumption and all the associated issues, including a decline in traditional skills such as fishing and hunting.

However, on a more positive note, indigenous communities are referencing the designation of the region as the ‘biodiversity capital of the world’ to aid their arguments with the authorities. The RCA management has also assisted each community to set up a vigilance system, with 2-4 community members selected as vigilantes who report back on a weekly basis. The scheme in Puerto Luz is organised by Rainforest Foundation UK and backed by TReeS. In the longer-term they are hoping to implement the conservation of ecosystem services proposal under the REDD+ Indigenous Amazon initiative.



*J.Alva meeting the CN San Jose de Karene* © ECA-RCA



### **TReeS small grants feedback**

**\*Juan Carlos Lara** (UNSAAC) (2013) – a past recipient of a TReeS small grant (2010), received a further grant to complete his postgraduate studies which was co-funded with Fauna Forever. He now works as co-ordinator for the Rainforest Foundation UK forest monitoring project which TReeS supports.

In his postgraduate research he investigated the biotic and abiotic factors that define forest structure and biodiversity, with a focus on terrestrial mammal and plant species. The study was undertaken at sites on both sides of the river Tambopata just downstream from its confluence with the river Malinowski, within the Tambopata National Reserve on one bank and within the Buffer zone on the other.

A range of conclusions included –

- evidence of significant diversity and richness of species in both areas. The regular presence of eight large mammal species was noted but there were also many signs of the presence of other mammal species.
- greater fragmentation of the Buffer zone forest for a range of identifiable reasons and fewer large, fruiting trees with important implications for the species that can be supported.
- the dominance of *Poaceae* (*Guadua* sp. - bamboo) in the Buffer zone, slowing the process of succession.
- more evidence of hunting of mammals in the Buffer zone which has important long-term implications for seed dispersal thereby slowing forest recuperation.

### **Government takes action against ‘blood gold’ mining**

The new government is taking illegal gold-mining in Madre de Dios, which has led to widespread deforestation over the last 10 years, more seriously. In early July, another major police operation within the Tambopata National Reserve (TNR) involved nearly 1,000 officers, over a four day period. Three major mining camps in the La Pampa area were targeted, plus nearly 100 satellite camps in the surrounding forest. Large amounts of machinery were destroyed and over 200 people were detained some of whom were charged with offences ranging from illegal mining to human slavery. A government minister declared that the authorities will not stop with the eradication of the camps but that specialised teams are working to identify the purchasers of the ‘blood gold’.

It is now proposed that illegal mining and associated operations fall under a new organised Crime Law. Illegal mining operations will be encouraged to formalise and to encourage this only three and not six permits will be required. However, the lifetime of concessions will be increased from 15 to 30 years but it must be remembered that in recent years out of 70,000, less than 200 were approved.

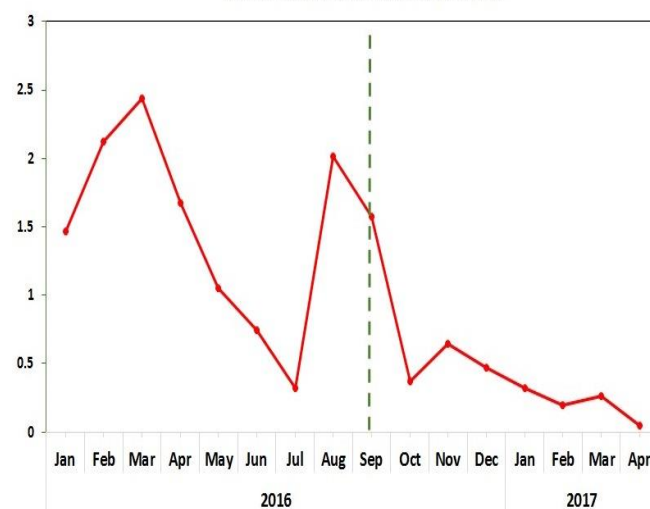
<http://elcomercio.pe/peru/madre-de-dios/pnp-sorprende-mineros-ilegales-pampa-operacion-fiestas-patrias-noticia-446120?foto=11>

### **TNR deforestation**

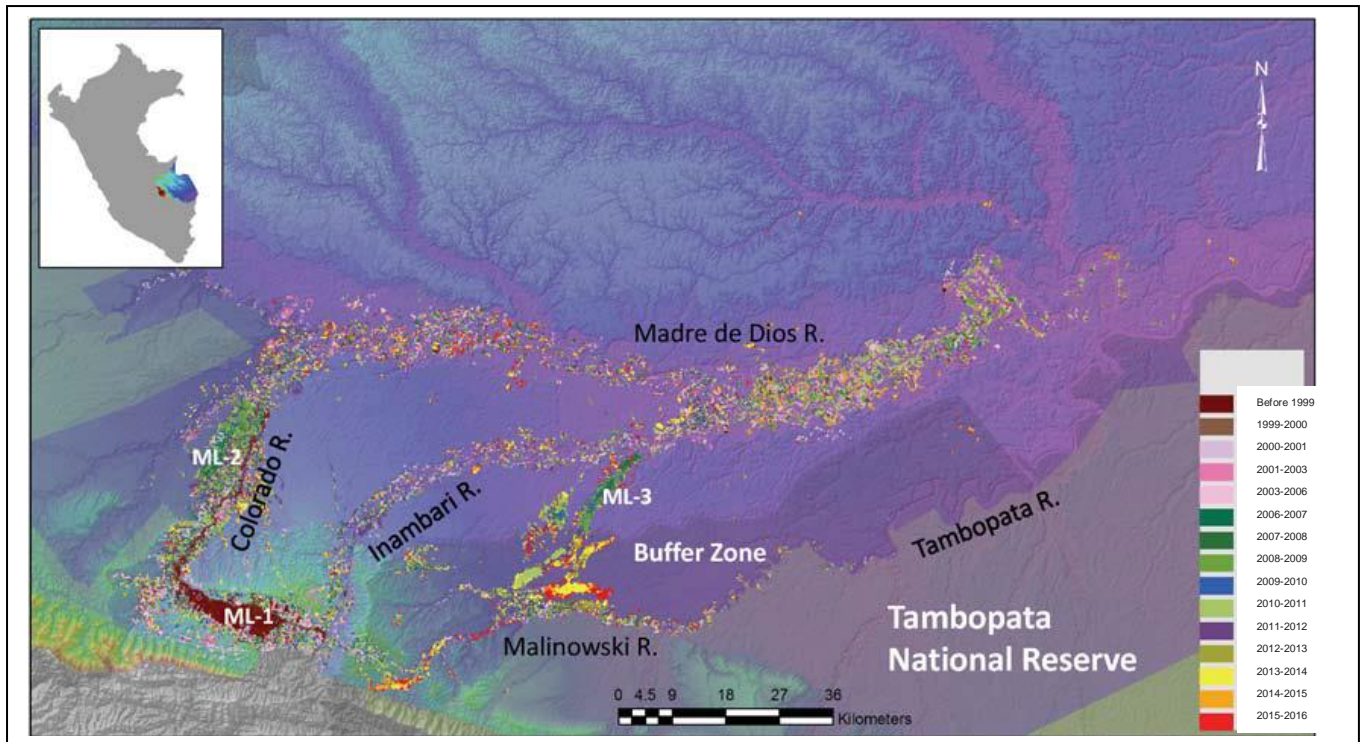
Analysis by MAAP - see graph below - reflects action by the Peruvian government to control illegal gold-mining in the Tambopata National Reserve (TNR). The data shows a decline in deforestation during the wet season in the first half of the year but then a significant rise once the rains declined, in July. However, after the government launched a series of raids on the gold-mining camps, in September, the deforestation rate greatly declined and this reduced rate was maintained in to the new 2016-17 wet season. SERNANP claimed to have removed all gold-miners from 90% of the area invaded within the TNR after the raids. MAAP estimate that from September 2015 to May 2017, 550 hectares within the TNR were deforested.

Of course, deforestation to the north, outside the TNR where SERNAMP has no control, continues with far fewer restrictions.

RN Tambopata Deforestation Rate



*Small-scale gold dredging on the river Las Piedras just upriver from its confluence with the river Madre de Dios*  
© TReeS



### **Climate change, Fires & Deforestation**

Research by MAAP (Monitoring of the Andean Amazon)(Report No.62 – see maps below) into climatic variations so far this century, incidences of forest fires and deforestation rates, indicates a significant correlation between the three variables.

Significant droughts – below 2,100mm of rainfall - have occurred approximately every 5 years, across much of Amazonia this century, in 2005, 2010 and 2016. These three years account for four of the highest annual incidences of forest fires – over 15,000 individually identifiable cases across the whole of the Peruvian Amazon, compared to closer to 10,000 incidents in years with average rainfall.

In Madre de Dios, incidences of forest fires have been highest along the Interoceanic highway which has led to extensive forest loss to facilitate gold-mining (the red dot) and an increasing number of plantations.

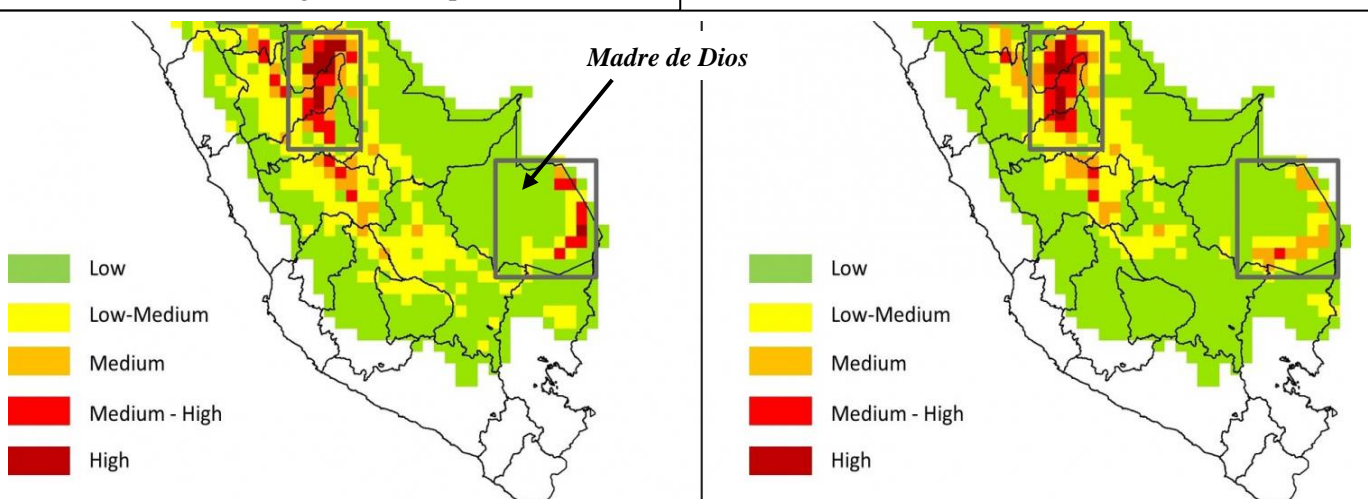
### **Forest loss from gold-mining (1999 to 2016)**

The Tambopata National Reserve is shown to the south, and the Reserve's buffer zone is shown north of it. The underlying colouration indicates relative changes in elevation – the foothills of the Andes can be seen in the bottom left hand corner of the image. The locations of three larger areas subjected to gold-mining are shown –

- \*ML-1 (Huepetuhe), and
- \*ML-2 (Delta-1), both within the Amarakaeri Communal Reserve;
- \*ML-3 (Guacamayo), which links the Interoceanic highway and the river Madre de Dios.

The major rivers impacted by gold mining are also labelled, including the river Malinowski - a tributary of the Tambopata.

© G.Asner + G.Tupayachi, August 2017





### **'Hurricane' level winds hit Amazonia**

The number of incidences of extremely strong winds associated with localised storms 'blowing down' extensive areas of forest is on the increase according to MAAP observations. The exceptional winds often lead to lengthy linear or fan-shaped patterns of forest loss.

GLADS (Global Land Analysis and Discovery) alerts, produced by the University of Maryland, investigate methods, causes and impacts of global land surface changes. The alert system processes Landsat imagery at 30 metre resolution and gives a very clear idea of natural and manmade land use changes. They provide the initial indications of major tree loss resulting from these winds across Amazonia.

One of these '*blowdowns*' was recorded at the end of last year within the Bahauja-Sonene National Park. The satellite image (above right) shows the '*blowdown*' (lighter shading) to the east of the confluence of the two rivers. It is estimated to have led to the loss of around 93 hectares of forest (in red in the lower image).

'*Blowdowns*' may aid forest regrowth as more sunlight can penetrate to ground level. However, they may also facilitate greater human activity, if they occur in more accessible areas.

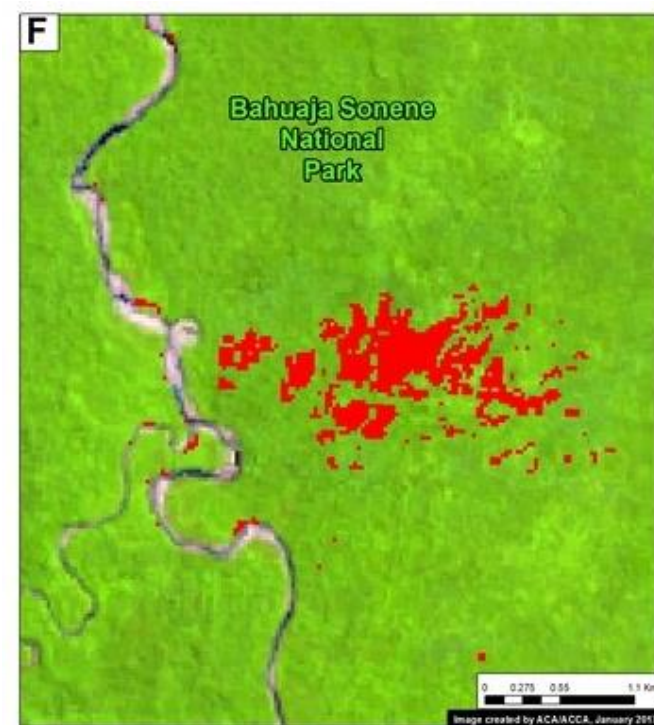
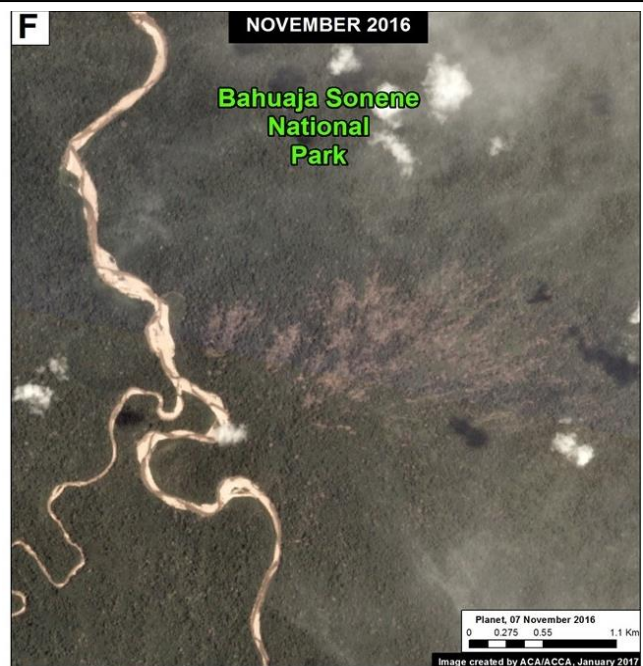
The number of incidences recorded across Amazonia and their size, both appear to be on the increase though there is not a great deal of historic data. This suggests a potential link to climate change, leading to stronger and more unpredictable wind patterns.

(See MAAP nos. 54 & 55)

### **ECA-RCA President addresses COP21, in Paris**

The President of the Reserva Comunal Amarakaeri (RCA) - Fermin Chimatani Tayori - was one of the guests invited to attend the supporting events during the major climate change summit held in Paris last December at which a new climate change agreement was signed by most nations. Fermin presented a paper on the development of Amazonian Indigenous REDD+ in the Amarakaeri Communal Reserve. He highlighted the holistic approach to the territorial management of the Reserve, which involves: co-management between Indigenous Communities and the Peruvian government; the inclusion of environmental functions beyond carbon sequestration; full community involvement in monitoring, reporting and cultural mapping; and building on local knowledge to ensure food security.

Reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries (REDD+) was agreed under the UN Framework Convention on Climate Change (UNFCCC) which has been active since 2005, with the objective of mitigating climate change through reducing net emissions of greenhouse gases through enhanced forest management. In the RCA, REDD+ has contributed towards a reduction in deforestation, a reduction in the causes of deforestation, and towards adaptations to climate change.



**President of the ECA-RCA, Fermin Chimatani outlining the REDD+ Indigenous Amazon proposal at the COP21 summit © ECA-RCA**

### **Interoceanic Highway scandal**

The scandal surrounding the construction of the Interoceanic highway linking Peru to Brazil, in Madre de Dios, has now become a much larger scale and more complex scandal.

The Interoceanic highway was built by the huge Brazilian construction company Odebrecht in partnership with the major Peruvian construction company Graña Montero. Odebrecht employees have now admitted that \$million payments were made to major Peruvian political figures towards their election campaigns over many years with the aim of securing major government contracts. The Camisea southern gas pipeline project and Chavimochic irrigation project, in northern Peru, are other examples where they are thought to have benefitted. Some of these contracts were awarded more than 10 years ago when current President Kuczynski was Prime Minister.

It is claimed that ex-President Toledo was paid \$20 million with respect to the Interoceanic highway contract. He has denied it and is in hiding abroad.

Meanwhile, Ex-President Humala and his wife were arrested in July and imprisoned pending trial after bail was refused, on the basis that they too received payments.

There have also been claims that Keiko Fujimori's Presidential campaign in 2011 may also have received funds though she has denied it.

Peru has now fallen to position no.101 out of 176 countries on the Transparency International Corruption index from no.83 in 2013.

### **WWF Brazil records new Amazon species**

A recently published WWF Brazilian Amazon programme report states that nearly 400 new species were recorded by the project during 2014-15 and that nearly 2,000 new species were recorded between 1999 and 2015. The new species included 93 fish, 20 mammals, 19 reptiles, 32 amphibians, 216 plant and one bird species. However, the report goes on to state that all these species are under increasing threat, especially from mining, logging and farming.

The report raises the possibility that significant numbers of new species might be found in the Tambopata/Madre de Dios region if an intensive research programme was undertaken.

[http://wwf.panda.org/wwf\\_news/?uNewsID=310013&utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3A+wwf%2Fnews+%28WWF+-+News%29](http://wwf.panda.org/wwf_news/?uNewsID=310013&utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+wwf%2Fnews+%28WWF+-+News%29)



### **Indigenous community land rights issues exposed**

CIFOR - the Centre for International Forestry Research – has just published a report focusing on land rights issues in an indigenous community in Madre de Dios.

The indigenous community of Tres Islas has good fishing and a surrounding forest with brazil-nut and many timber species as well as natural beauty ecotourists would greatly enjoy. However, the villagers have learnt that having communal land rights does not guarantee the enjoyment of all these rights. “Our community received its land title more than 22 years ago through the efforts of our parents and grandparents,” said Sergio Perea, President of Tres Islas, one of the communities included in a global forest-tenure study conducted by CIFOR. “We thought having this title would give us the right to all the resources on our land.” However, this isn't the case - land titles don't guarantee the villagers tenure security or improved livelihoods. Furthermore, community land titles do not cover the entire area that the villagers claim as their territory. This has led to conflicts with outsiders who hold timber rights or other extractive concessions, for example, for brazil-nut harvesting, or eco-tourism on land that the community considers its own. For decades in Madre de Dios, these concessions were handled by different Ministries, which did not coordinate with one another. Consequently, today, there are many overlapping claims. To further complicate matters, some concessions, such as oil and gas and large-scale mining, are controlled by the national government, while regional governments manage others. They also face conflicts with outsiders who hold mining concessions that overlap with their land, as well as with miners and loggers who operate on their land illegally.

Furthermore, because the forests are considered to be state property and communities must obtain permits to extract on a small-scale basis timber and non-timber resources for commercial use. That is often a time-consuming process that requires technical expertise and the filing of annual operating plans. Most communities lack the expertise to develop such plans, so they hire outside forestry experts. As a result, the high cost of preparing the plans can exceed the expected revenue from the limited timber sales.

The community has used innovative ways to organize and obtain the assistance they need to find solutions. “They have developed new skills, as they had to talk with the government, NGOs, and the courts.” In 2010 the community decided to limit access to its lands and in 2012 won the right to do so at Peru's Constitutional Tribunal. They have now developed a timber management plans and are preparing plans for other extractive products and community-based tourism.

<https://forestsnews.cifor.org/44493/whats-in-a-land-title?fnl=en>

<https://www.youtube.com/watch?v=08DkBABfOz8>

*Sergio Perea, president of the Tres Islas community in Peru, presenting Brazil nuts.*

© Juan Carlos Huayllapuma/CIFOR



## **Peru News**

The impacts of *El Niño costera* - affecting the coastal strip – in February and March were the worst since the devastating *El Niño* events of 1983, and were more extensive than the 1998 event. Almost the entire length of the coast was affected, especially from Ica northwards, after two weeks of regular rain. This led to many land and mudslides in which long hidden river courses reappeared, often in the middle of new urban developments. Over 25,000 hectares were flooded with 12,000 hectares of crops lost, especially between Chiclayo and Piura. Over 100 people died and 700,000 were affected, with 100,000 significantly affected. Nearly 30,000 lost their homes, leaving over 150,000 people homeless, while the homes of another 120,000 people were damaged. 2,500kms of roads were washed away, while 20% of all roads were damaged, and over 300 bridges were destroyed, or damaged.

The government response was, in general, considered satisfactory especially in Lima and where the impacts were more localised but the extensive flooding in the north, around Piura, the authorities found more challenging to handle. Annual economic growth is expected to halve from around 5% to 2.5% as a result.

President Kuczynski – who spent part of his childhood in Fleetwood, Lancashire and then attended Oxford University – has seen his popularity rating halve during his first year in office from 60% to 30%. He has lost several sympathetic Ministers who lost the support of Fuerza Popular – the party of Keiko Fujimori – which has a majority in Congress. At the same time, he has come under increasing pressure from the Fujimori siblings to either grant their father a pardon, or at least release him in to house arrest. Meanwhile, ex-President Fujimori faces a further trial arising from six killings by an army death squad while he was in power.

In May, the contract to build a new airport at Chincheros, north of Cusco, was annulled after much argument over the private-public partnership nature of the project.

A three month strike by teachers over pay and conditions was, finally, resolved at the start of September.

We are grateful to the Peru Support Group (PSG):

[www.perusupportgroup.org](http://www.perusupportgroup.org)

and David Hill: @DavidHillTweets & [www.hilldavid.com](http://www.hilldavid.com) for the sourcing of some details in TReeS News.

**TReeS Library:** since June 2015, hard copies of documents/reports relating to Tambopata & Madre de Dios are no longer placed in the TReeS library. We will still list details of all new articles, documents and reports received/sighted in the newsletter (see below). Many of them can be traced via the internet while some directly linked to TReeS will be placed on the TReeS website. Recently received/sighted documents and reports -

-‘*Seasonal drought limits tree species across the Neotropics*’, A.Esquivel-Muelbert et al, *Ecography* 40: 618–629, 2017;

-‘*Solar radiation and functional traits explain the decline of forest primary productivity along a tropical elevation gradient*’, N.Fyllas et al, *Ecology Letters*, (2017) 20: 730–740;

-‘*Carbon uptake by mature Amazon forests has mitigated Amazon nations’ carbon emissions*’, O.Phillips et al, *Carbon Balance Management* (2017) 12:1;

-‘*Leaf-level photosynthetic capacity in lowland Amazonian and high elevation Andean tropical forests of Peru*’, N.Bahar et al, *New Phytologist*, Vol.214, May 2017;

-‘*Leaf aging of Amazonian canopy trees as revealed by spectral and physiochemical measurements*’, C.Chavana-Bryant et al, *New Phytologist*, Vol.214, May 2017;

-‘*The variation of productivity and its allocation along a tropical elevation gradient: a whole carbón Budget perspective*’, Y.Malhi et al, *New Phytologist*, Vol.214, May 2017;

-‘*New 2017 ‘Hurricane Winds’ in Peruvian Amazon*’, MAAP No.55;

-‘*Gold Mining Increases in Buffer Zone of Tambopata National Reserve*’, MAAP No.60;

-‘*Illegal Gold Mining Decreases in Tambopata National Reserve*’, MAAP No.61;

-‘*Fire, Rain, and Deforestation in the Peruvian Amazon*’, MAAP No.62;

-‘*Entre la minería aurífera y la conservación: impactos, Resistencia y libre determinación del pueblo Harakmbut*’, J.Alva (Beca 2015);

-‘*Relación entre la estructura y diversidad de los bosques nativos de Tambopata y la diversidad de la fauna asociada: influencia de factores bióticos, abióticos y antropogénicos*’, J.C.Lara (Beca 2013);

-‘*Diversidad del orden Chiroptera en la zona de influencia del Manu Learning Centre*’, S.Goizeder (Beca 2017);

-‘*Efecto de la inclusión de la harina de semilla de Copazú (Theobroma grandiflorum) en la dieta balanceada durante el crecimiento en fase juvenil de paco (Piaractus brachipomus)*’, S.Castillo (Beca 2015);

-‘*Inambari: la urgencia de una discusión seria y nacional*’, J.Serra Vega (Pronaturaleza) (2010);

-‘*Superposicion espacial en la zonificación de bosques en Madre de Dios*’, (Cifor – Brief No.58)(2012);

-‘*Estudio diagnóstico de la actividad minera artesanal en Madre de Dios*’, C.Mosquera et al (CI)(2009);

-‘*Accelerated losses of protected forests from gold mining in the Peruvian Amazon*’, G.P.Asner & R.Tupayachi (Environmental Research Letters 12 (2017) 094004 );

-‘*Evaluación de la calidad fisiológica de semillas de Shihuahuaco (Dipteryx Micrantha) de bosques de terraza alta de dos procedencias, a través de la prueba de envejecimiento acelerado*’, S.Rengifo/R.Mamani (Beca 2015);

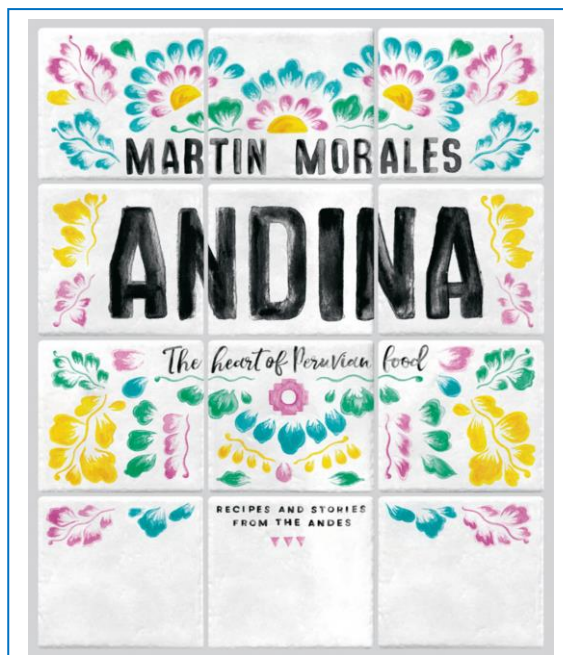
## TReeS Newsletter by email

Due to higher postal charges, TReeS is now distributing most Newsletters by email. On this basis, if you have received this Newsletter by post and don't think we have your email address in our database, please email us at: [treesuk1@gmail.com](mailto:treesuk1@gmail.com) Receiving the newsletter by post can still be requested.

### ANDINA: The Heart of Peruvian Food

Publisher: Hardie Grant Price: £27.00

Chef, restaurateur and cookbook author Martin Morales, has spent the best part of his life exploring Peru; collecting, gathering and recording traditional recipes and dishes along the way. Following the success of *CEVICHE: Peruvian Kitchen* (2013) his bestselling cook book, which was translated into 12 different languages and sold over 120,000 copies, his second book, *ANDINA: The Heart of Peruvian Food*, will be a celebration of his love of the Andes, its dishes, ingredients, people, stories and culture. Many of the exciting ingredients such as *maca*, *quinoa* and *lucuma* and techniques such as fermentation have been paramount to Andina cuisine for over 7,000 years. For the first time ANDINA will tell that story, with authentic and creative recipes that are served in our restaurants and those I have researched and discovered on my travels deep into the Andes" says Martin.



### TReeS T-shirts

TReeS still has limited numbers available of the T-shirt featuring the Carnegie Scientific Institute (© Carnegie Airborne Observatory/Greg Asner) satellite image of the confluence of the La Torre and Tambopata rivers - see TReeS News No.76. The T-shirt is available in Medium & Large sizes on a good quality, white cotton T-shirt.

**Price: £12.00** each, including P&P, or **£20** for any 2, or more.

The 'Earth Warrior' (XL)(£9) and 'Rainforest to Desert' designs (M & L)(£10) are also in stock.

### TReeS Membership

The basic TReeS membership rate is still just £15 / annum.

Membership is due on the 1<sup>st</sup> of **January** each year.

We would be most grateful if members could amend their standing orders, if necessary.

All cheques are payable to – 'TReeS'.

**TReeS Membership:**  
**£15 per annum.**

**TReeS contact details –**  
**P.O.Box 33153,**  
**London NW3 4DR**

### TReeS USA –

P.O.Box 842, Shasta Lake,  
CA96019-0842, USA.

TReeS USA is run by Bud and Margaret Widdowson.

All members in Canada / the USA are requested to pay their annual membership via TReeS USA.

### TReeS committee 2017-2018

*Sally Edwards*

*John Forrest*

*Dr Helen Newing*

*Huma Pearce*

*Elizabeth Raine*

*Daniel Turner*

*Rebecca Warren*

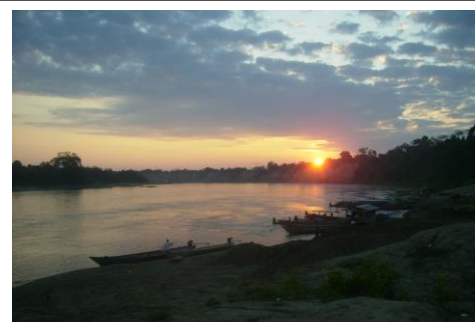
### TReeS website

Details of TReeS merchandise can be found at the website:

[www.tambopata.org.uk](http://www.tambopata.org.uk)

If you would like to receive the TReeS Newsletter in future by email, please send a request to –

[treesuk1@gmail.com](mailto:treesuk1@gmail.com)



Sunset Tambopata dock, P.Maldonado © TReeS