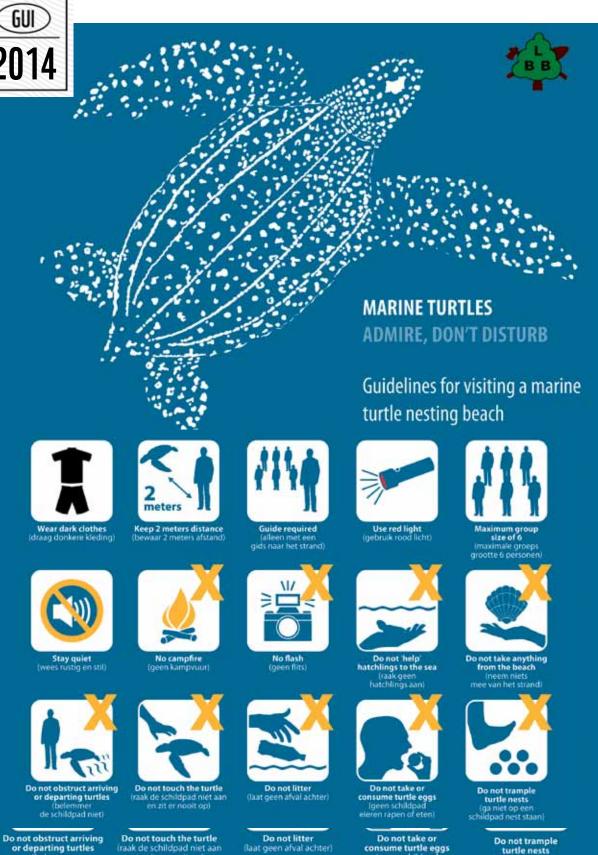


WWF Guianas Highlights 2014



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Cover image: This educational billboard was produced by WWF and the Ministry of Physical Planning, Land and Forest Management to inform people how to behave when visiting turtle nesting beaches.

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The WWF Guianas programme in 2014 was co-funded by The Embassy of the Kingdom of the Netherlands in Suriname, WWF-Netherlands, WWF-Belgium, WWF-France, WWF International, WWF-US as well as National Postcode Lottery (Netherlands), European Union, DEAL, IDB, NORAD and GOMIAM.

The WWF Marine Turtle Campaign was supported by the Adessium Foundation. Report compiled and edited by Ewen Legg of Halcyon Medical Writing.











FOREWORD



Mark Wright

Every two years, the WWF publishes its Living Planet Report¹. Like the previous nine editions, the 2014 report offers a health check of the planet with an indication of whether things are getting better, are steady or are getting worse. The 2014 report does not make for happy reading.

Earth is now home to more than 7 billion people and the collective impact we are having is unprecedented. The Living Planet Report demonstrates how significant and widespread that impact is. In less than 50 years, for example, the population size of over 10,000 representative species has been halved. This is within one lifetime; so what future will we bequeath our children?

WWF is known globally as a conservation organization but we also stress the need for people to live in harmony with nature. As Marco Lambertini, our new Director General, has reiterated 'Nature conservation and sustainable development go hand-in-hand. They are not only about preserving biodiversity and wild places, but just as much about safeguarding the future of humanity - our well-being, economy, food security and social stability - indeed, our very survival'.

This makes the future of the Guianas doubly important. Across the three territories of the Guianas, we are still blessed with unrivalled forest cover, fantastic freshwater resources and globally significant levels of biodiversity. Partly thanks to small populations, living mainly along the coasts, threats and pressures are still low and nature is able to thrive. This is a part of each country's proud natural heritage but more than that, when we consider what is happening elsewhere, the forests and other landscapes of the Guianas represent some of the last remaining strongholds of outstanding nature – anywhere.

Whilst it is true to say that, across the Guianas, we live in a truly exceptional corner of the planet it is also clear that we are approaching a potential turning point. There is a rapidly growing interest, especially from foreign investors in our forest, fish and mineral resources coupled with a strong local desire to diversify the economy. National development is critical and investment is welcomed but the need for strong environmental governance has never been greater – to ensure sustainable growth; to protect the natural resource base; and to ensure each country reaps maximum benefits from the value chain.

WWF believe that environmental protection and development are not alternative choices. Ouite the opposite in fact – we believe that sustainable development can only happen with good environmental protection. We are committed to working with governments and local partners to realise such a sustainable future - where the values of nature and of natural resources are recognized and managed for the long-term good of all. This report, detailing some of the work carried out during 2014, indicates some of the ways we try to do exactly that. We hope you enjoy it and, for further information, please do visit us on our website: www.wwfguianas.org

Mark Wright, Regional Representative a.i. WWF Guianas

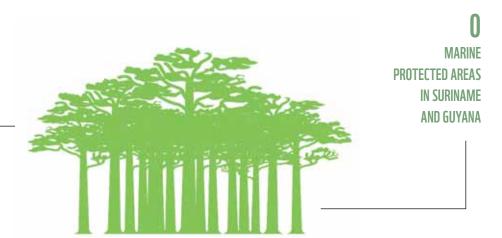
1. http://wwf.panda.org/about_our_earth/all_publications/living_planet_report/

PROTECTED AREAS AND SOUND LAND-USE PLANNING

77-98%

OF THE SURFACE OF THE THREE GUIANAS IS TROPICAL RAINFOREST

Almost 50% OF FRENCH GUIANA IS A PROTECTED AREA



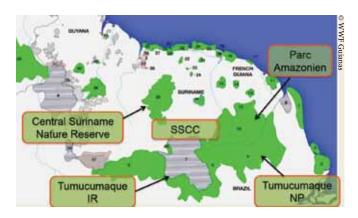
Almost 3%

OF GUYANA'S LAND AREA
IS COVERED BY THE
KANASHEN COMMUNITY
OWNED CONSERVATION AREA
SOON TO BECOME PART
OF THE COUNTRY'S
PROTECTED AREA SYSTEM

WWF Guianas is building relationships with indigenous communities and government organisations to promote and develop innovative Land Use Planning and Protected Areas initiatives.

We believe that sound national-level land use plans are critical for underpinning sustainable development that recognises the inherent and economic value of the flora and fauna of the Guianas and the aspirations of its citizens.

THE SOUTH SURINAME CONSERVATION CORRIDOR: PROTECTING A WEALTH OF WATER



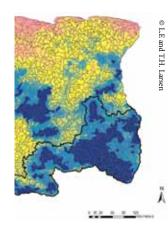
The SSCC will link existing national and international protected areas

> Suriname is amongst the top 5 countries in the world for per capita freshwater production. The effects of climate change are likely to impact water security in many parts of the world, meaning countries with large supplies of fresh water hold a key international resource. Indeed, a number of Suriname's island neighbours in the Caribbean already suffer from water scarcity.

THE SSCC TARGETS THE HEART OF SURINAME'S FRESHWATER PRODUCTION COVERING **2 MILLION HECTARES AND** 2/3 OF ITS HEADWATERS

The South Suriname Conservation Corridor (SSCC) project, an exciting joint-funded collaboration with Conservation International, aims to secure the head waters of Suriname's major rivers.

An eco-hydrological survey, supported by Suriname's Anton de Kom University, successfully completed mapping of Suriname's headwaters in 2014. The survey identified areas of greatest water production, threats to water availability, and the possible impact of climate change on water production. The information gained showed that 10-20% of Suriname's territory, located in the south of the country, produces over 60% of its total freshwater.



Suriname currently has 13 protected areas covering 14% of the country. The SSCC targets the heart of Suriname's freshwater production covering 2 million hectares and 2/3 of its headwaters. Ensuring protection of the south of Suriname would not only secure the majority of Suriname's headwaters but will also link with the existing Central Suriname Nature Reserve and protected areas in French Guiana and Brazil.

The SSCC project has seen unprecedented levels of engagement from indigenous communities (see page 6) during extensive consultations and information sharing activities. In a critical first step, and after a full year of engagement, leaders from the different groups have collaborated to prepare a written commitment to support the development of a protected area in Southern Suriname.

Rainfall in central and eastern Suriname: 60% of the country's fresh water (dark blue) is provided by 10-20% of its area WWF Guianas are providing additional support for the SSCC project through a specialist consultancy that will make the business case for fresh water protection in Suriname through identifying and calculating the value of water to different sectors. Establishing mechanisms for collaboration with those protecting the water supply is also a key part of the SSCC programme and will allow the freshwater to be both protected and give tangible benefits.



Village representative from Tepu (left) hands over a copy of their indigenous laws, captured in written form for the first time.

INDIGENOUS PEOPLES OF SOUTHERN SURINAME LOOK TO THE FUTURE

The unique biodiversity of Suriname is matched by the diversity of cultures which have left their mark on and continue to inhabit this small country of less than 600,000 people. Working alongside and learning from their intimate knowledge of Suriname's nature and landscape is a key aspect of WWF Guianas' work.

Over centuries the indigenous peoples of Suriname have developed a culture and way of life that keeps them in balance with nature. As part of the engagement process for the SSCC project members of the village of Tepu agreed to collectively write down and share their *Ingi wet* (indigenous law) for the first time. The *Ingi wet* covers when and what to hunt, how to rotate crops and other activities key to their stewardship of the environment.

Sustainable hunting and fishing: "In the dry season, we need to fish. In the rainy season we need to hunt. When we fish we use neku (an extract from a poisonous vine) to fish. We do not do this every day, but only every few months. This is the law of the older people."

The importance of the forest: "In the forest we have medicines, maraja and strings as material to fasten things together and therefore the forest is important to us."

The sharing of these laws offers a unique insight into how the indigenous peoples of Suriname have lived and prospered for thousands of years while maintaining the natural surroundings that make this country one of the greenest in the world. The foresight of the members of the Tepu village communities and their understanding of the importance of their continuing role as stewards and protectors of the nature of Suriname is clear not only in the act of writing down their *Ingi wet* but in the text contained therein: "If young people do not know this then it is not good, this is the law of Tepu".

COMMUNITY ENGAGEMENT: PARTICIPATORY MAPPING IN SURINAME



Though their relationship with the land has been shorter than that of the indigenous peoples, the maroon communities of Suriname are in many ways as deeply rooted. The jungles of the interior sheltered the maroons ancestors following their escape from slavery in the 1700s allowing them to not only survive but to thrive. In the 1760s, a peace treaty was signed making the maroons amongst the first peoples to gain

Participatory mapping in action. Intense discussion ensures that the map depicts community knowledge of the land. independence from colonial rule in the Americas. Over the ensuing years the diverse maroon communities have built on their ancestral knowledge from Africa and that of indigenous communities to gain an intimate knowledge of the land.

Because of this deep connection the relocation of almost 5,000 Saramaccan Maroons from their lands on the banks of the Suriname River to make way for the Brokopondo hydroelectric project 50 years ago is still felt to this day. The relocated communities on the Upper Suriname River feel vulnerable since their land rights are not recognised and access to the area for industrial exploitation is becoming easier.

In order to help empower the people, document their communities and the use of the land in the area a participatory 3D mapping project has begun to create an actual physical map. The work is a collaboration between the Saramaccan Tribal Authorities (VSG), WWF Guianas, Tropenbos International Suriname, University of Utrecht and the Technical Centre for Agriculture and Rural Cooperation (CTA).

The project engaged all levels of the local community with children and young people completing the initial stages of the map and the older community members adding the detail and depth of knowledge that comes with age. For the first time all of the settlements within the area are clearly and accurately represented. Mapping of land cover and land uses in the pilot area, close to the community of Jaw Jaw, has been completed and assessment of ecosystem services has been started.

Following completion of the first stage of the project, the Saramacca elders presented their work to a group of invited guests from from local and international organisations. The project has produced an excellent 15 minute film2 explaining the background, process and outcomes of the work; and a presentation on the work was given by one of the local interpreters during the recent World Parks Congress in Sydney, Australia.

2. https://vimeo.com/108466803

UPPER BERBICE BIODIVERSITY ASSESSMENT TEAM IN GUYANA



A caiman on the Upper Berbice

Have you ever been followed through the forest by a curious jaguar or had caiman gnaw on your boat to make sure they were not missing out on a free meal? These were new experiences even for the highly experienced scientists who were part of the WWF-Guyana Upper Berbice Biodiversity Assessment Team (BAT).

The fearless animals were just one sign of the untouched habitat found in the Upper Berbice region, described by team members as the most pristine they had ever seen. The BAT scientific team included Guyanese and international scientists with expertise in the detection and identification of the full range of birds, plants and animals.

High levels of diversity were found including many rare species, with more than 10 likely new to science. Team members also took the opportunity to train University of Guyana students, recent graduates and members of the nearby Kwakwani Village community in biodiversity field research techniques. The survey was part of a larger series of studies in Guyana which also covered heavily mined areas including the Middle Mazaruni and Konawaruk River (see page 18).

The Upper Berbice area is one of increasing interest for logging and mining and the BAT survey data will help to inform conservation and development plans. The results so far suggest that wildlife viewing and other forms of ecotourism may be an alternative stream of income for the area due to the presence of several highly desired bird species alongside iconic animals like the jaguar.

STAFFING IMPROVEMENTS AT KAIETEUR **NATIONAL PARK**

The remote and beautiful Kaieteur National Park (KNP) is home to the spectacular Kaieteur Falls one of the most powerful waterfalls in the world, with an average flow rate of 663 m³ per second. Set amongst the pristine jungle in the Potaro-Siparuni Region of Guyana, the park is home to jaguars, howler monkeys and the beautiful endemic Golden Rocket Frog.

Building on the improvements to infrastructure and staffing at KNP made in 2013, the WWF-supported Protected Areas Commission (PAC) hired KNP's first site-level manager. The new manager has already facilitated major repairs to severely eroded trails from the top of the waterfall to the KNP Guest House.

The wardens/guides of KNP are the public face of the park and are all members of the local indigenous community. WWF provided a further warden and guide training course in 2014, training 21 participants including existing and aspiring park staff. This 8-day course was attended by members of Amerindian villages of the region including Chenapau, Paramakatoi, Karisparu and Campbelltown. Eight candidates submitted applications to the PAC for employment, and four have already been hired from a previous training.



Successful KNP trainees display their certificates

ECOLOGICAL AND CULTURAL EDUCATION AT PEPERPOT NATURE PARK



Education and conservation are at the heart of Peperpot Nature Park, Suriname's first private nature reserve, situated 5 km from the capital Paramaribo. Peperpot is the site of one of the oldest coffee and cocoa plantations in Suriname and is not only rich in natural wonders but also has much cultural history etched upon its land-scape. The plantation is a microcosm for much of the nation's development and today reflects many of the best aspects of modern Suriname in its marrying of progress with environmental protection.

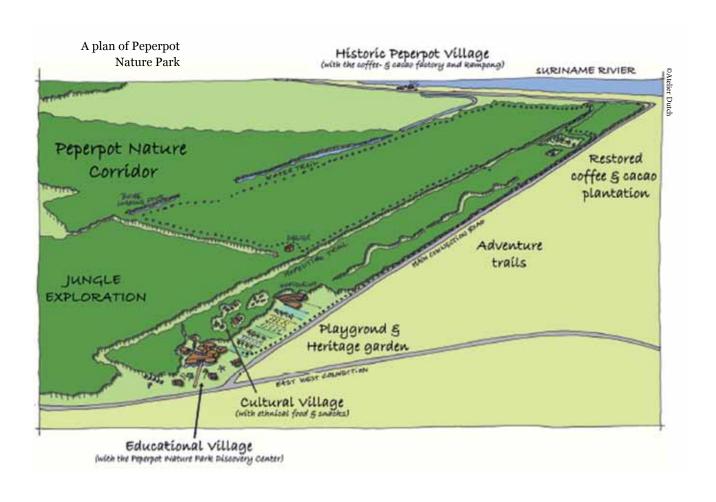
This year has seen great strides forward including the laying of the foundations for the Peperpot Discovery Centre, which was celebrated by Mr Ernst Noorman, the Dutch ambassador. The completed building promises to be a world-class venue focused on celebrating Suriname's natural heritage.

Building work on the Discovery Centre began despite torrential rain, an indication of the determination of the construction team and site managers Stichting Peperpot Natuur Bos in driving the project forward in 2014. With the support of WWF Guianas, the onsite team have made remarkable progress, pioneering building techniques new to Suriname along the way and taking great pride in the construction. Sustainable development is the touchstone of the project and the roof-frame of the building is constructed from 100% Surinamese Forest Stewardship Council (FSC) timber.

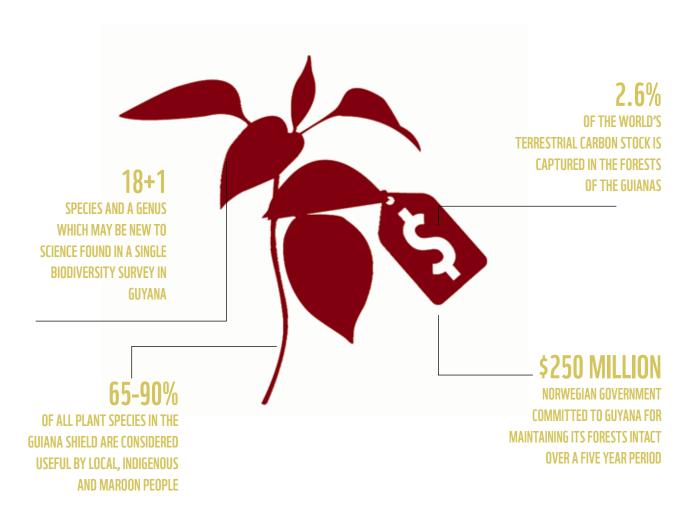
Workers defy the weather to begin work on the Peperpot Discovery Centre The unique vision of Peperpot Nature Park has attracted significant further funding in 2014 with the announcement of a €2.3 million donation from the Dutch Postcode Lottery adding to the generous funding from The Royal Dutch Embassy. The funds will go towards expanding the Discovery Centre and additional infrastructure including a research centre, developments for recreation and tourism, new nature trails, renovation of the cacao and coffee factories and protection and management of the wildlife Nature Corridor.

This year the ground has also been broken on a one-kilometre protective canal along those sections of the 820 hectare protected area at greatest risk from urban expansion; later, recreational waterways will be constructed for boating and birdwatching. In the meantime, Peperpot continues to welcome visitors and educational activities are underway.

The park recently held a 2 day education workshop for 6-14 year olds. The children were taught about biodiversity, took part in a scavenger hunt and learnt to make binoculars. Using such activities Peperpot hopes to become the training ground for the next generation of Surinamese naturalists.



PAYMENT FOR ECOSYSTEM SERVICES



The Guianas offer a wealth of opportunities for protecting the environment through the development of ecosystem services payments, from the implementation of carbon trading schemes to protect the forests of the interior to marine turtle tourism on the coast.

WWF and partners continue to build on previous successes by collaborating with government, supporting involvement of indigenous peoples as part of the monitoring process and, increasingly, with the private sector.

PREPARATION FOR AND IMPLEMENTATION OF REDD+



Rene Somopawiro, Foundation for Forest management and Control (SBB), Suriname speaks at the HFLD Conference

"THE FOREST IS IMPORTANT TO A DIVERSE RANGE OF **USERS AND IS THEREFORE** A BREEDING GROUND FOR **CONFLICT. AT THE SAME TIME** IT CREATES A PERFECT SETTING FOR DIALOGUE"

Globally, deforestation accounts for nearly 20% of greenhouse gas emissions, more than all transportation combined. Only the energy sector has a greater impact in terms of CO₂ release. The UN Reducing Emissions from Deforestation and Forest Degradation (REDD) and REDD+ programs are aimed at financially compensating developing countries for their work to curb deforestation and encourage conservation, sustainable management of forests and improvement of forest carbon stocks.

South America is thought to hold more forest carbon than any other region in the world. While the Guiana Shield region, of which Guyana, Suriname and French Guiana form a part, contains up to 25% of the world's undisturbed tropical forest. Because of the large amount of carbon held in tropical forest, protecting carbon stocks in this region can have a particularly large impact

in terms of reducing carbon release, not to mention the protection of biodiversity.

Following the successful completion of the WWF-supported REDD+ Preparation Proposal in Suriname, the first tranche of \$3.8 million of World Bank funding was released to the government in June. One of the major events prior to the release was the hosting of the 1st international conference on the impacts of REDD+ for the so-called HFLD (High Forest Low Deforestation) countries by the National Environmental Institute (NIMOS) in Paramaribo. WWF supported delegates, including members of the local community, who discussed their experiences and the challenges of REDD+ implementation alongside representatives of Bhutan, Belize, Guyana, Suriname and the United Nations Development Programme (UNDP).

As Cedric Nelom of NIMOS, a presenter at the conference, noted "The forest is important to a diverse range of users and is therefore a breeding ground for conflict. At the same time it creates a perfect setting for dialogue." With this in mind the major focus for the REDD+ preparation team in 2015 will be raising awareness with community members and other stakeholders to create a constructive dialogue.

In Guyana, WWF has supported the production of a first draft report on Guyana's REDD+ Readiness Package by the Guyana Forestry Commission, a key document for demonstrating delivery on REDD+ and securing associated funding.

Additionally, WWF Guianas is joining forces in a regional initiative with the French Office National des Forêts - International (ONF-I). The key outputs will be high resolution mapping of the impact of gold mining on deforestation and freshwater systems across the Guiana Shield, with a strong training component to increase the capacities at official forestry institutes for this monitoring now and in the future.

SMARTPHONE TECHNOLOGY AND COMMUNITY EMPOWERMENT



The forests of Guyana are not the first place you would expect to bump into a data analyst tapping busily at their smartphone. But the recently trained monitors from the Wai Wai community of Kanashen have been making use of this most

Participants in discussion at the WWF/Global Canopy Program CMRV training workshop adaptable of 21st century technologies as part of a Community Monitoring, Reporting and Verification (CMRV) project for the past year.

Monitoring, reporting and verification (CMRV) are an integral aspect of REDD+ and Guyana is the first country to establish a national MRV system, as part of the \$250 million Guyana-Norway REDD+ partnership. With 14% of the country owned by indigenous communities this makes Guyana the perfect location for the development and refinement of CMRV.

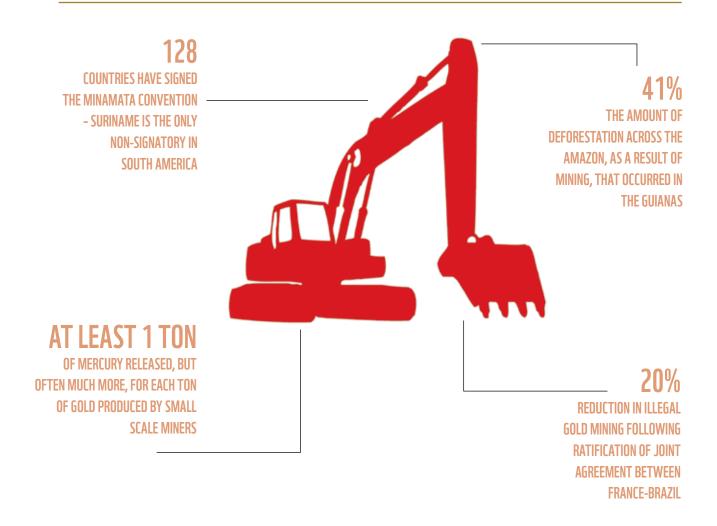
The Norwegian Agency for Development Cooperation (NORAD)-funded Global Canopy Program launched a CMRV project with the North Rupununi District Development Board (NRDDB), a body comprising members of 16 indigenous communities, in 2012. This recently completed project pioneered the use of smartphone technology for data collection. The now fully trained local community practitioners of the NRDDB are now helping train members of the Wai Wai community with the support of WWF Guianas.

The Wai Wai are learning data collection methods which match the national MRV system allowing integration and proofing of data on forest carbon and forest cover. The CMRV monitors will use smartphones to collect other information important to the community, including information on fish and wildlife stocks. On addition, the trainees will carry out and record interviews to provide information on wellbeing, healthcare and education. Six community members have taken part in four training sessions during 2014, with a final session planned for 2015, and have already spent time in the field collecting data.

The CMRV system in Kanashen serves a dual purpose, besides preparing the community to participate in REDD+, it doubles as the monitoring system required for recognition as a component of Guyana's new protected areas system. The 249-member Wai Wai community owns the largest area of titled land in Guyana, covering 625,000 hectares of forest and constituting 2.9% of Guyana's land area. Once protected area status is secured in 2015, as is expected, this will increase the area of Guyana's land under protection from 5.4% to 8.3% of the country.

It is hoped these CMRV training sessions will ultimately provide a model which can be expanded to the 200 indigenous communities of Guyana and later to Suriname, building capacity for the REDD+ programme which will in turn provide a source of funding to help sustain indigenous communities and train new local practitioners in those communities which adopt REDD+.

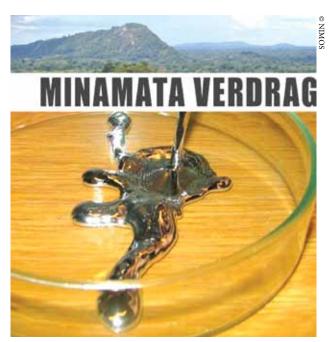
GOLD-MINING POLLUTION ABATEMENT



As many as 100,000 people may be employed in gold mining across the Guiana Shield. This provides critical income but, thanks to the widespread use of mercury, can have devastating impacts on the environment and on human health.

WWF Guianas is promoting the signing, ratification and, importantly, the implementation of the United Nations Minamata Convention to oblige countries to phase out mercury.

THE MINAMATA CONVENTION ON MERCURY



NIMOS report raising awareness on the Minamata Convention In the 1950s the dancing cats of Minamata Bay were something of a curiosity and tourist attraction. Residents of the village noticed that only the cats which lived by the side of the bay eating discarded fish, and not those living higher up on the slopes of the mountains, showed this strange behaviour. It wasn't until the children and adults of the village started falling ill and dying that the truth behind the dancing cats became clear, the fish stocks the village relied on were being poisoned by methyl-mercury, released from a nearby factory.

Today, mercury pollution is a major issue throughout the Guianas and just as in Minamata the concentration of mercury in fish stocks is bringing the problem to the doors of many who live miles from the remote mining stations which are the source of the pollution.

As we approach the 60th anniversary of the disaster at Minamata, WWF Guianas is backing the push in Suriname for ratification of the UN convention named

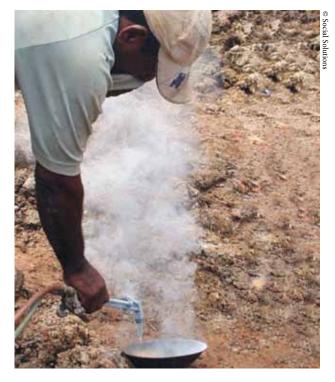
in the honour of its victims. The convention commits signatory nations to phase out mercury use in activities such as small-scale gold mining and becoming a signatory will allow access to financial support and the sharing of technology to reduce mercury pollution.

A NIMOS authored report written with support from WWF Guianas recommending ratification of the Minamata convention was recently passed to the Surinamese government. The report includes a roadmap to an action plan on mercury, a national priority as well as a requirement within the convention. The report has been presented during various meetings to stakeholders and government officials, resulting in support and a positive attitude towards the Minamata convention at the highest governmental level.

Guyana became a Party to the Minamata convention during its inaugural year, 2013. The Guyana Geology and Mines Commission (GGMC) under the supervision of the Ministry of Natural Resources and Environment (MoNRE) and through support from WWF has completed the first draft of a National Action Plan on Mercury, setting out the road map for Guyana's implementation of the Minamata Convention on Mercury. Work on the action plan including discussions with miners, industry leaders and affected villages will continue in 2015.

MERCURY IS EXTREMELY
PERSISTENT IN THE
ENVIRONMENT AND
WWF GUIANAS RECOGNISE
THE NEED FOR LONG-TERM
PLANNING

The signing of the Minamata convention is a first positive step down a long road. Mercury is extremely persistent in the environment and WWF Guianas recognise the need for long-term planning. We are already in contact with scientists from the west coast of the United States, where dangerous levels of contamination persist more than 100 years after the gold rush, to gain insights into additional activities which can protect the environment and peoples of the Guianas from this continuing threat.



MERCURY AND SMALL-SCALE GOLD MINING: THE ILLUSION OF SAFETY

The history of mercury use is long and varied with ancient civilizations utilizing it for alchemy, medicine and as a talisman against evil; in the Surinamese Winti religion mercury is still used as a tapu to protect against evil powers. Perhaps surprisingly, the knowledge of mercury's toxicity stretches back equally far. The Romans used criminals as their principal workers in mines extracting mercury ore recognizing that the work negated the need for a formal execution. Why then, given this long understanding of the dangers, does the use of mercury persist in small-scale gold-mining throughout the Guianas?

To help answer this question WWF Guianas co-financed a study on mercury use in small-scale gold-mining in Suriname with the research network on small-scale

GOld MIning in the AMazon (GOMIAM). The study aimed to understand how miners used mercury, their knowledge regarding its dangers, attitudes regarding its use, and crucially, opinions regarding eliminating mercury from the gold-mining process. The knowledge gained will be used to help improve targeted interventions to reduce mercury use.

A miner 'protects' himself with a cloth while burning mercury-gold amalgam

THE LARGEST GROUP OF **GOLD MINERS SURVEYED** REGARDING THE EFFECTS OF A BAN SAID THEY WOULD LIKELY STOP USING MERCURY

Close to 200 miners were surveyed with almost all admitting to using mercury. More than half of the miners indicated that they were concerned about contact with mercury, primarily because of the adverse health effects. However, many were nonchalant, disbelieved risks or trusted in the efficiency of rudimentary protection and their own strength.

A common attitude was that mercury was simply an occupational hazard. With one 50 year old miner explaining "Look, a garimpeiro (gold miner) is not afraid of mercury because there isn't anything you can do to protect yourself anyways".

Given the above misconceptions and lack of knowledge it is clear that more education is needed. In Guyana the GGMC has finalized a curriculum for the Guyana Mining School and Training Centre, with WWF support, which it is hoped will be made compulsory for licenced miners.

However, the authors of the above report contend that what people know may not be consistent with what they do. One Surinamese miner said of attempts to educate around mercury use: "Many people won't believe it. Instead of first explaining everything, it is better to just prohibit its use, and throw those who still use it in prison."

The largest group of gold miners surveyed regarding the effects of a ban said they would likely stop using mercury. With this in mind the principal lesson of this study may be that the ratification of the Minamata convention and a plan towards phasing out mercury use are likely to result in the most enduring positive effects.

KONAWARUK, HOPE FOR 'THE DEAD RIVER'



Guyana means "Land of Many Waters" but there were concerns that the life in one stretch of Guyana's river system had been extinguished. Guyanese media have reported the Konawaruk River, heavily impacted by gold mining, as 'dead'.

The Konawaruk is a relatively short 60 km waterway that has been the site of gold mining for over 100 years, the result is a ravaged landscape, a mosaic of destruction and

Aerial view of gold mining in Guyana

partial recovery. Here and there 40 m trees overlook piles of mud and sand from the beds of the mined-out river system, monumental relics of a once dense forest canopy. The entire main river channel and all but a few headwaters and tributaries unsuitable for mining have been altered, almost beyond recognition.

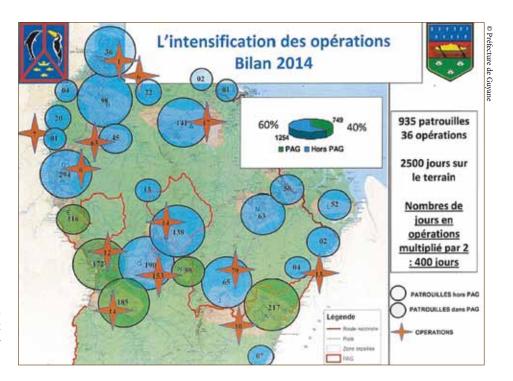
The Guyanese government, concerned by reports regarding the state of the Konawaruk, requested that the Environmental Protection Agency (EPA) investigate. WWF Guianas assisted the EPA by inviting a team of local and international scientists to address the concerns voiced by the media as part of the wider Guyanese BAT survey programme (**see page 8**). The opportunity was also used to train EPA and GGMC staff in field research techniques.

A blackwater creek similar to the undisturbed areas of the Konawaruk The preliminary results of the survey suggest that while the river is not 'dead', it is in critical condition. In the areas close to mining, worrying signs, including deformities in frogs were present. The resilience of life was, however, manifest in the strange ecosystem of the main river channel, with specialised fish hunting in the murky sluggish waters created by the suspended silt and altered river channel. Biodiversity was generally low, with a few hardy species representing an aquatic biome recognised throughout the world for its diversity and numerous unique species.



Yet there are some hopeful signs on the Konawaruk. Pockets of high diversity, including rare and endemic species, remain in a number of tributaries and in the headwaters of the river. These oases may in time be the wellsprings for a recovering river. The BAT team suggest that with improved mining practices, including restoring the flow of the main river channel, protection of those areas not yet damaged by mining and careful restoration projects following the cessation of mining activity the Konawaruk may yet, after great expense and in the very long term, return to full health.

REDUCTION OF ILLEGAL GOLD-MINING CAMPS IN FRENCH GUIANA



Map showing increased patrols and actions against illegal mining by French Authorities

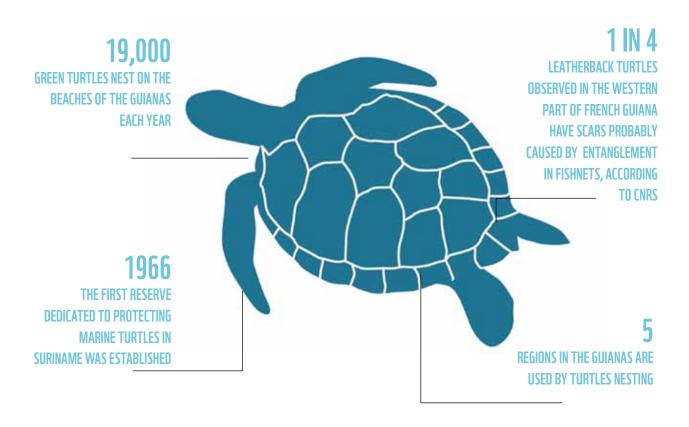
> A major 20% reduction in illegal gold mining, resulting in a significant drop in water pollution, has been achieved on the French side of the French Guiana-Brazil border in 2014. The reduction comes following the full ratification of a bilateral agreement on the control of illegal mining activities in the border area, originally signed in 2008.

The ratification of the treaty is a major achievement for the governments of Brazil and France. Over the years a number of French Police Officers and illegal miners have been killed as part of the gold-mining trafficking and subsequent anti-illegal mining operations in the area and this joint commitment is an important tool for restoring order.

The importance of these developments has been emphasised by the publication of a scientific paper estimating that 1,680 km² of tropical forest was destroyed in Suriname, French Guiana, Guyana, Brazil, Ecuador, Peru, Colombia, Venezuela, and Bolivia between 2001 and 2013, as a result of small-scale gold mining alone. The impact on the Guianas has been particularly stark with 41% of the total loss, representing the equivalent of 86,000 football fields, occurring in Guianan forests.

The full ratification of the treaty is mirrored by determined efforts to strengthen the working relationships between WWF Guianas and WWF-Brazil, recognising our long shared border, common issues and the transboundary nature of threats. This relationship has allowed coordinated actions to be carried out, promoting government-level cooperation to fight illegal activities, particularly mining, in the border area.

MARINE TURTLES OF THE GUIANAS



The beaches of the Guianas are one of the last strongholds of marine turtles and ensuring their protection and eventual recovery is a key objective of WWF Guianas.

Each year thousands of nesting female turtles visit the region to lay their eggs on the relatively undisturbed beaches of the Guianas. From the many thousands of eggs laid, only a small proportion of hatchlings will reach adulthood and, decades later, return to the beach where they were born to lay more; continuous conservation efforts are needed to enable the recovery of the species and to allow the enjoyment of this nesting spectacle in the future.



"No nyan Krape eksi" (Don't eat turtle eggs) Kenny B spreads the 'Krape? Nee!' message with local children at Paramaribo Zoo

SURINAME MARINE TURTLE CAMPAIGN

Many Surinamese people still consider sea turtle eggs a delicacy and, despite their protected status, thousands of eggs are consumed each year. The Surinamese police force and government agencies have made great strides in tackling the poaching and smuggling of turtle eggs with the support of WWF. However, if the problem is to be solved long term the demand for turtle eggs must be addressed at its source.

In January, WWF Guianas launched its first ever year-long campaign targeting consumers of turtle eggs in Suriname, using additional funds from the Adessium Foundation. The innovative campaign used multiple approaches to deliver a sustained message to communities in order to change attitudes towards eating turtle eggs. Twelve prominent members of Surinamese society, including musicians, politicians, athletes and a beauty queen, agreed to serve as campaign ambassadors and spent one month each taking part in high profile activities to raise awareness.

The importance of reaching the younger generation with the aim of creating generational change was at the forefront of the campaign. Kenny B, one of Suriname's most popular singers, met and recorded videos³ discouraging the eating of turtle eggs with Surinamese school children at the Paramaribo Zoo during his month as Marine Turtle Ambassador. Many other smaller events were also organised.

As in many cultures, food is at the heart of Surinamese society and popular TV chef Micle Fung recorded a dedicated programme spreading the message of not cooking with turtle eggs. Micle demonstrated a number of delicious alternative recipes and WWF arranged for these to be distributed as part of the campaign. As turtle eggs are often cooked with masala WWF partnered with one of Suriname's largest masala producers who showed their support by adding the "Krape? Nee!" (Turtle? No!) logo to their product.

The mainly Muslim Javanese community has a tradition of consuming turtle eggs. To raise awareness during the holy month of Ramadan a documentary was made at the local Himayatul mosque. Imam Ozir taught children about sea turtles and explained the importance of caring for nature as part of Islam. "Use nature with moderation...it is a gift from Allah and one should be grateful".



The year-long campaign received significant positive media attention with numerous events covered and it is hoped that a first step has been taken towards changing attitudes towards eating turtle eggs in Suriname. A photo exhibition named 'Delicacy' will travel to several locations around Paramaribo in 2015 to highlight a year of innovative events, positive media coverage and enthusiastic commitment from the campaign team.

3 https://www.youtube.com/channel/ UC6vyDMCCHcgO1bDi6nCehFg

DYNAMIC COAST, DYNAMIC CONSERVATION



The sea turtles of Suriname are facing a new threat as the nesting beaches of Leatherback, Green and Olive Ridlev turtles now overlap with an existing sand-mining operation. The protection of sea turtles in Suriname dates back to 1966 when the Wia-Wia reserve was set up to protect nesting beaches. But thanks to strong coastal currents the beaches of Suriname are driven westward at a speed of 1-2 km per year and important new nesting beaches were soon outside the safety of the reserve.

A leatherback hatchling in the foreground at Braamspunt beach, a sand-mining concession

With the beaches' westward creep from Wia-Wia to Krofaja Pasi to Matapica and finally to the new site at Braamspunt, some 70 km from the original reserve, new names have been matched by new dangers. Over the past three years WWF has used aerial surveys to map Suriname's dynamic beaches. The mapping is used to identify new beaches and changes to old beaches, anticipate new threats and coordinate protection for new nesting sites. Though the protected status of the turtles and their eggs has moved with them, the beaches' westward march has created new and easier points of access for egg poachers and now the additional threat of heavy industry looms.

In 2014, the turtle beaches overlapped with an existing beach at Braamspunt where sand mining to supply the building trade has been legally ongoing for over a decade. The result has been the unintentional destruction of turtle nests by heavy machinery used to load up barges for transportation of the mined sand. The Ministry of Physical Planning, Land and Forest Management, who have responsibility for turtle conservation, quickly brought attention to the situation by celebrating the start of the 2014 nesting season, with WWF Guianas, on Braamspunt beach.

Our sea turtle conservation efforts continue to match the dynamism of Suriname's changing coast and a new mobile outpost has been constructed on Braamspunt to house the wardens charged with monitoring the turtle populations and preventing poaching. In an attempt to solve the problem, a letter requesting a ban on mining during the nesting season has been sent to the Ministry of Natural Resources who are responsible for oversight of sand-mining.

In 2015, WWF will continue to be proactive working with all stakeholders to highlight this issue, preserve critical nesting habitat and ensure coastal protection.

NEW MARINE TURTLE ECOTOURISM OPPORTUNITIES

Leonsberg Jetty has been an important ferrying station for passengers wishing to cross the mouth of the Suriname River and reach New Amsterdam, in the district of Commewijne, for many years. Though many passengers can still be seen using the service, on foot or alongside their mopeds, the opening of the Jules Wijdenbosch Bridge between Paramaribo and Commewijne led to a reduction in business for the boatmen.

The entrepreneurial boat men have since turned to ecotourism to bolster their income and dolphin tours have been leaving



Leonsberg Jetty, Paramaribo

from the jetty for some years now. Recently, boatmen and the tour companies which hire them have begun combining their dolphin tours with a visit to the turtle nesting beach at Braamspunt.

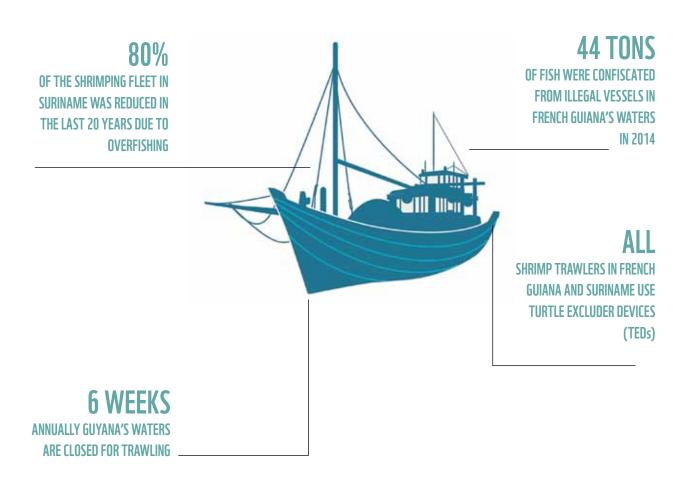
IN ORDER TO HELP ENCOURAGE SUSTAINABLE ECOTOURISM. TRAINING HAS BEEN GIVEN TO THE BOATMEN AND TOUR **GUIDES BY THE GREEN** HERITAGE FUND AND WWF

In order to help encourage sustainable ecotourism, training has been given to the boatmen and tour guides by the Green Heritage Fund and WWF. The Green Heritage Fund led the training on dolphin friendly practices including reducing noise and keeping a safe distance from the pod, particularly important when dealing with the shy Guiana dolphins which make the waters off the coasts of the Guianas their home (see page 27).

During the WWF Guianas' portion of the training, the importance of not disturbing newwsting turtles was emphasised and good practices such as using only red lights on the beach, wearing dark clothes and discouraging visitors from picking up hatchlings or taking rides on the massive leatherback females were discussed. Participants were willing and enthusiastic and one organisation has agreed to conduct early morning tours to decrease the disturbance of nesting females.

To help bring home the message for visitors and operators alike, a billboard with the rules for visiting nesting beaches was unveiled at Leonsberg Jetty at the end of the training (as you can see on the cover of this report). Two more billboards will be placed at the Braamspunt nesting beach in February 2015, when the nesting season starts.

SUSTAINABLE FISHERIES



WWF continues to work towards creating sustainable fisheries off the coast of the Guianas. Helping develop strategies to reduce illegal fishing and to reduce the impacts of fisheries on marine habitats and non-target species are key elements of our work.

The fishing grounds of the Guianas are among the most productive of the world. We are alert to the impact of changing practices which may impact the marine environments of the Guianas, such as the emerging swimbladder trade.



Police in French Guiana investigate possible illegal fishing

THE BATTLE FOR SUSTAINABLE FISHING IN THE GUIANAS

Illegal, unreported and unregulated (IUU) fishing represents an extraordinary 200% of the local fishing effort in French Guiana. As a result, mitigating this pressure on both targeted and non-targeted species is both a conservation priority and an issue of sovereignty. In December 2014, shots were exchanged between a French Army marine patrol boat and illegal fishermen crossing into French territorial waters from Brazil, bringing the total number of incidents with foreign boats to 63 in 2014 alone. After boarding the hold was found to contain large numbers of fish and 30 kg of swim bladders (see page 26). Seized fish are discarded, as required by regulations, meaning 44 tons of fish were lost to the market during the year.

INCIDENTS OF ILLEGAL FISHING ARE LEADING TO INCREASED **LOSSES IN A FISHERY** WHICH ALREADY FACES PRESSURE ON ITS ATTEMPTS TO ACHIEVE SUSTAINABILITY

Incidents of illegal fishing are leading to increased losses in a fishery which already faces pressure in its attempts to achieve sustainability due to changing practices and the accidental capture, so called bycatch, of marine mammals and reptiles. WWF Guianas has been supporting the use of vessel monitoring systems throughout the Guianas to help prevent illegal fishing across marine territories and in protected waters. Reactions to the systems from fishing crews have been positive due to the benefit of improved safety for vessels fitted with the system.

In an attempt to better understand and, thereby, reduce bycatch two on-board observers were recruited by the Regional Fisheries Council in French Guiana and trained by WWF to collect information on catch composition and take tissue samples from Guiana dolphins (Sotalia quianensis) caught accidentally in whitefish gill nets. Year- and coast-wide information collecting is expected to allow a better understanding of the changes in bycatch over time and space. The observers have also supervised the resuscitation and release of a number of marine turtles. In Guyana, WWF, in partnership with the Department of Fisheries, are engaging boat owners and fishing crews to implement successful on-board video monitoring of bycatch. A final pilot study is expected to commence early in 2015.

Ultimately, the information collected by the above monitoring systems will be used to help create effective measures to reduce Guiana dolphin and marine turtle bycatch and the results extended, with additional verification, to describe the situation across the region.

THE EMERGING THREAT OF SWIM-BLADDER **FISHING**



Arrests on the west coast of Mexico and California have highlighted the trade in totoaba (Totoaba macdonaldi) swim bladders, used by the large marine fish to regulate their position in the water column. The species' swim bladders are termed by some "aquatic cocaine", not only due to the association with criminal gangs but also the high prices achieved on the black market. Dishes made using the bladder are a delicacy in China, where the species traditionally used is now extinct. The totoaba, which is endemic to the Gulf of California, is now also facing extinction due, at least in part, to this lucrative trade.

Fish lie alongside their removed swim-bladders at a landing site, French Guiana In the waters off the Guianas fishing for swim bladder has also emerged as a threat to both fish stocks and marine mammals and reptiles. Local fishermen appear to be targeting Cynoscion acoupa, known by many names including the acoupa weakfish internationally and the bang bang in Suriname. The bang bang is a member of the same family of fish as the totoaba, the Sciaenidae, and though the prices for their swim bladders are much lower, the trade remains a potentially lucrative option for local fishermen. Bang bang swim bladders may reach \$300/kg on the Asian market compared to perhaps \$3.50/kg for a standard catch of fish for local consumption.

This new form of fishing may have significant environmental impacts due to the different practices used to maximize bladder collection. As the quality of the fish flesh is no longer a priority, some fishermen set their nets for up to 24 hours rather than the 4 hours used previously. This has a dual effect, not only increasing the likelihood of turtles and dolphins being tangled in the nets but also ensuring that any animals caught will most certainly drown if unable to reach the surface to breathe. In addition, many fish are discarded after the bladder has been removed making this fishery very wasteful.

Swim bladder has already been confiscated from illegal boats in French Guiana's waters (see page 25) and the trade is known to operate through the border town of Oiapoque, from where the bladder moves to Brazil and on to China. Anecdotal reports suggest increases in turtle strandings and numbers of dead fish washing up on the shores of the Guianas in 2014 and the new swim-bladder fisheries is a likely suspect for this disturbing development. WWF Guianas remains vigilant regarding this new threat and continues to keep lines of communication with the fishing industry and relevant authorities open in order to stay informed of new techniques and educate individuals about the environmental impact of this new fishing practice.

GUIANA DOLPHIN DAY, FRENCH GUIANA



Dolphin-Day participants spot Guiana dolphins from the shore

Children take part in the Guiana Dolphin Day

activities

Little is known of the Guiana dolphin which ranges along the coasts and estuaries of north-eastern South America and eastern Central America. The nature of this enigmatic creature until recently slipped even the grasp of taxonomists who have now classified it as a separate species from the tucuxi (Sotalia fluviatilis) found further up the rivers of the Amazon Basin. Currently, not enough is known about the Guiana dolphin to reveal its conservation status with the IUCN Red List showing it as 'Data Deficient'.

The Guiana dolphin resembles a bottlenose dolphin, the archetypal dolphin. But unlike its larger relative, the Guiana dolphin is generally shy of approaching boats and there are no reports of bow-wave riding from this species. However, acrobatics such as breaching,

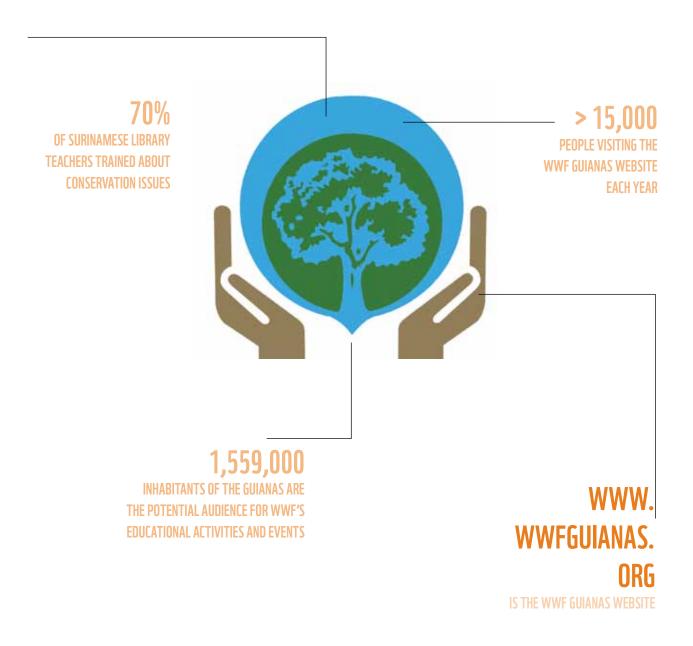
somersaults and tail splashes have been reported. In French Guiana, the Sotalia Observation Network (Réseau d'Observation Sotalie) was launched in January 2014 in an attempt to address the dearth of information on the species. Since then more than 100 dolphin sightings have been documented by volunteers.

In June, a Guiana Dolphin Day was organized to increase public interest and awareness about the species and mark World Oceans Day. WWF organized an educational quiz about the fish and cetaceans of French Guiana and documentary screenings on sustainable fishing. The day helped to inspire the interest of the next generation in Guiana dolphins with fun activities like face painting and T-shirt printing as well as creating a beautiful mural on the theme of the sea and fishermen.



At the water's edge, a dozen Guiana dolphins delighted visitors taking part in the observation session on the Montabo trail. Young dolphins closely accompanied adults who appeared to be teaching fishing techniques in between their bursts of excited breaching behaviour. The day was a great success attracting close to 100 visitors and in view of the public interest, and following many requests, a similar event will be staged in 2015.

EDUCATION AND AWARENESS



Communicating with the public and raising awareness is key to WWF Guianas' conservation strategy. On top of the overarching educational project at Peperpot Nature Park and the highly successful Marine Turtle Campaign, we have undertaken a number of other important education and communication projects in 2014.

CONNECTING WITH THE PUBLIC AND RAISING AWARENESS



The Kwik Bus will spread the 'no mercury' message alongside a mass media campaign In June, in a collaborative effort driven by WWF, 35 organisations came together for three days of training with 129 primary library school teachers, 70% of all those in Suriname.

The training was complemented by the launch of the Green Education Box. Environmental education material was pooled and will be distributed in a beautiful environmentally-sound bamboo box, which is being manufactured locally.

Also in Suriname, the "Kinderboeken festival" introduced the world of marine turtles to hundreds of children in a captivating, fun and interactive manner. With awareness being the first step towards a change in behaviour, it is encouraging that children who attend these events always state afterwards that they will never eat marine turtle eggs.

December saw the launch of the NoKwik Campaign, the first time that general awareness on mercury has been tackled on a major scale (www.nokwik.sr) and a collaborative effort from WWF, the UNDP, the Suriname Conservation Foundation (SCF) and the Suriname Environmental and Mining Foundation (SEMIF). The campaign aims to collect 100,000 signatories in the first year and highlight that mercury is a problem affecting everyone, not just the interior. 50,000 people are expected to participate in activities which are a cry to the government to respond to this threat.

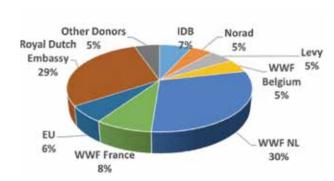


Example of draft designs for the KNP visitor exhibition

In French Guiana, WWF has continued support to the Sololiya Project an environmental education program focused on water. This year, the program has worked with more than 2,300 people, including 1,614 children, and trained fifty teachers. The annual 'Mayouri Dilo' to promote water knowledge was a great success.

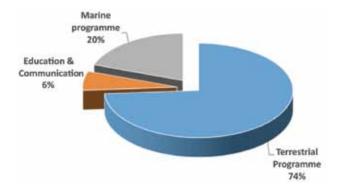
In Guyana, the Kaieteur visitor experience will be enhanced with the development of an exhibit highlighting KNP's natural and cultural resources. The exhibit will fill the space designed for this purpose when the KNP Visitor's Centre was originally built in 2010. The design will be completed by April 2015.

THE WWF GUIANAS PROGRAMME FINANCIAL OVERVIEW OF THE CALENDAR YEAR 2014



SPENDING PER DONOR WWF GUIANAS FOR 2014

The Royal Dutch Embassy and WWF-Netherlands were major donors in 2014 providing close to two thirds of the year's donations. WWF-France, WWF-Belgium, and WWF International, as well as the Inter-American Development Bank (IDB), the European Union and Norwegian Agency for Development Cooperation (NORAD) all made generous contributions of between 5-10%. "Other donors" includes the contribution from the Adessium Foundation, Cedla/GOMIAM and WWF-US. The substantial funds from the Dutch National Postcode Lottery are included with the WWF-Netherlands funds. This is because these funds are routed through the WWF-Netherlands office and do not come directly to the WWF Guianas office.



SPENDING PER THEME FOR CALENDAR YEAR 2014

The total spending for 2014 was US\$3.75 Million covering: the Terrestrial Programme including Land-Use Planning and Protected Areas, Payment for Ecosystem Services and Gold-Mining Pollution Abatement; the Marine Programme consisting of Marine Turtles and Sustainable Fisheries; and Education & Communication. The total spending increased by 3% compared to 2013. As in previous years our main focus was on the execution and implementation of our project activities which was reflected in the number of agreements signed in Guyana, Suriname and French Guiana in 2014. Funding from our WWF partners finishes in June 2015 and so a new 3-year programme, based on the existing thematic areas will be prepared for consideration by our donors.

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5 + 1 THEMES

WWF Guianas' work focuses on five themes: Land-Use Planning and Protected Areas, Payment for Forest Carbon and other Services, Gold mining Pollution Abatement, Marine Turtle Conservation and Sustainable Fisheries; Communication and Education is an overarching theme for all activities.

WWF has been present since 1968. The Guianas



+ 9.0 MILLION EURO

WWF Guianas' four-year program has a total value of over 9.0 million euro divided among the three Guianas. 26
EMPLOYEES

WWF Guianas has a staff of a

WWF Guianas has a staff of 26 employees, who work together with countless supporters, volunteers, grantees, consultants, partner organizations and government institutions.