



Final report of Club P.A.N.'s fifth school year (October 2011 - June 2012)



CLUB P.A.N.

A conservation education project of the Wild Chimpanzee Foundation in 4 schools in Guinea and in 12 schools in Côte d'Ivoire

Funded by the Sweden Chimpanzee Trust



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1 Introduction



Wild chimpanzees are only found in tropical Africa, where their populations have declined by more than 66% in the last 30 years, from 600,000 to fewer than 200,000 individuals (Butynski 2001).

A survey conducted in Côte d'Ivoire reports, that over the last 18 years, chimpanzee numbers have plummeted by 90% (Campbell et al., 2008).

Throughout their range, chimpanzees are threatened by deforestation, bushmeat hunting, disease, and capture for the pet trade. Although it is officially forbidden to kill, consume or trade wild animals, illegal hunting is widespread. In 1996, 35.5 million wild animals, totaling 120,000 tons and worth 149 million USD, were killed by Ivorian hunters (Caspary et al., 2001). The western chimpanzee has already disappeared from three African countries and is on the verge of extirpation in others.

Urgent action is needed!

To assure the protection of chimpanzees, the Wild Chimpanzee Foundation will continue its important short and long-term programs. Short-term projects, such as increased anti-poaching patrols and other law-enforcement strategies aim to reduce the impact of bush meat hunting on local wildlife populations. The long-term projects like public outreach and awareness raising programs can play a vital role in changing local attitudes towards the intrinsic value of wildlife. Conservation education is a priority long-term action for the conservation of chimpanzees and other wildlife (Kormos and Boesch, 2003).

The WCF created in 2007 nature clubs called "Club P.A.N." (Personnes, Animaux et Nature / People, Animals, & Nature) for primary schools in West Africa. Because the Club P.A.N. was very successful in its last years we continued the following project for its fifth year in Côte d'Ivoire and for the second year in Guinea.





2 Club P.A.N. goals



Club P.A.N. formulated the following conservation goals:

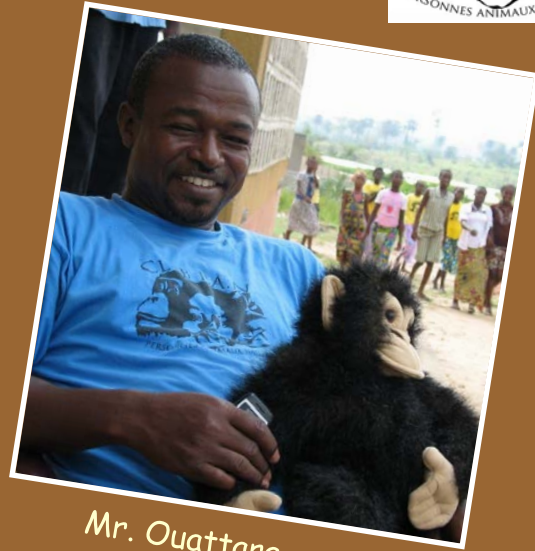
Goals	#1	#2	#3	#4
	Teach children about the local flora and fauna, so that they appreciate the biodiversity that exists in their region.	Teach basic knowledge on environmental issues in order to promote care and awareness towards nature conservation.	Discourage the trade in illegal bushmeat by reducing the likelihood that the current generation of children will consume or trade bushmeat in the future.	Promote the conservation and research activities undertaken within the countries.
Activities	Five lessons emphasize the flora and fauna of the region's ecosystems: (lesson topics: "tropical rainforests", "biodiversity", "chimpanzees", "the food chain" and "the NP").	During the "environment" and "the animals and their habitats" lessons, students are taught the fundamental principals of biology, ecology and conservation.	The "human-animal conflict" lesson focuses on the illegal bushmeat trade. Information is presented regarding the threats to plants and animals, discussion rounds and a play about the trade sensitizes the students and are used to convey the destructive effect of these practices.	The "protected areas" lesson conveys the importance of national parks and what humans are allowed to do or not to do in these areas.
All lessons are interactive with games, songs, movies, nature walks and clean up actions. Teachers are intensively trained in biology and environmental sciences. Parents are actively involved in the club as well on "parents' day" when the children from each class present what they have learnt in form of summaries, plays and songs.				
Results (as determined by pre-and post evaluations)	Increased knowledge regarding the local flora and fauna.	Increased knowledge regarding environmental issues.	Students are able to identify the conflicts between humans and animals. Changed attitudes regarding the consumption and trade of bushmeat.	Knowledge and support of the conservation and research activities.



3 Staff



Mr. Guilahoux



Mr. Ouattara

The creation of Club P.A.N. was only possible because of a long-term collaboration with the CPE "Cellule des Projets Environnementaux". The CPE coordinators Mr. Guilahoux and Mr. Ouattara are also the coordinators of Club P.A.N. since its start in 2007.

Together they are guiding all 16 principals and 16 teachers. They assist the teachers on-site with the lessons, conduct the teacher trainings, evaluate the project by quantifying student participation and administering an pre- and post-evaluation.



The Ivorian coordinators travelled to Guinea to establish the Club P.A.N. there in 4 schools since 2010.





3 Staff



Mr. Gnlou



Mr. Kouakou

We want to thank the two Club P.A.N. teachers Georges Gnlou from Petit Tiémé and Adrien Kouakou from Tai, they took over some tasks from our two coordinators while they were gone to implement Club P.A.N. in Guinea.



Georges Gnlou and Adrien Kouakou are trained by Hilaire Guilahoux and Dabila Ouattara to become our new Club P.A.N. coordinators for Côte d'Ivoire in the next years.



3 Staff



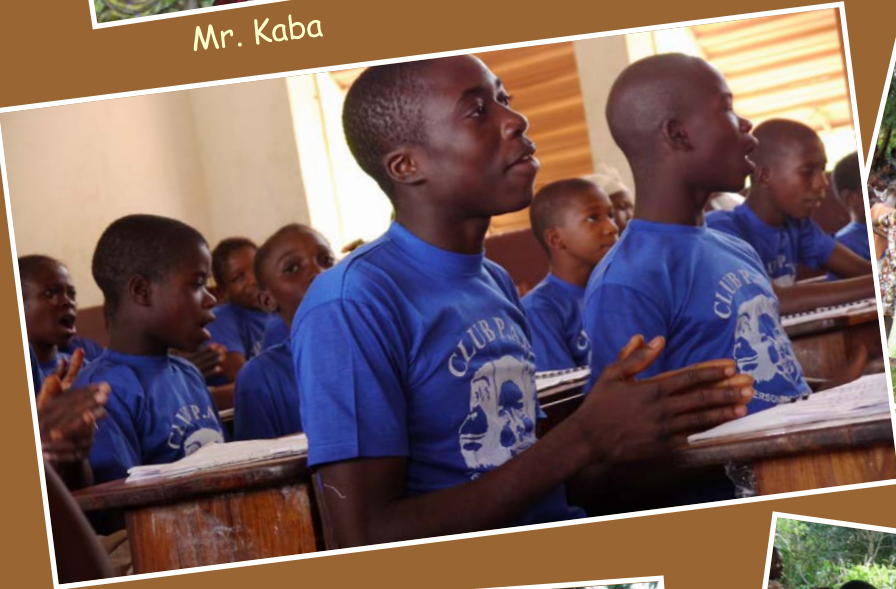
We want to thank the two Club P.A.N. coordinators in Guinea, they did a great job during their second school year!



Mr. Kaba

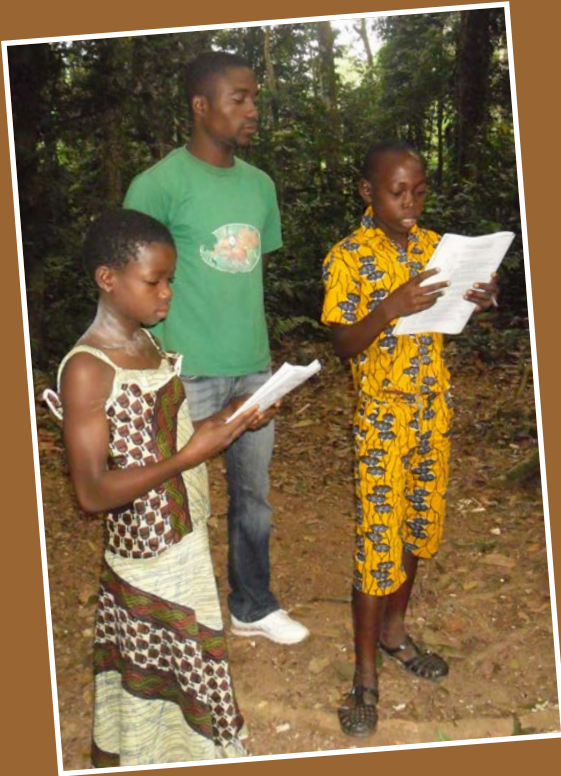


Mr. Diallo





3 Staff



Some pictures from the 16 principals and 16 teachers that belong to our Club P.A.N. staff. During their Club P.A.N. lesson animations, the parents days and the teacher training.



We want to thank all of them!



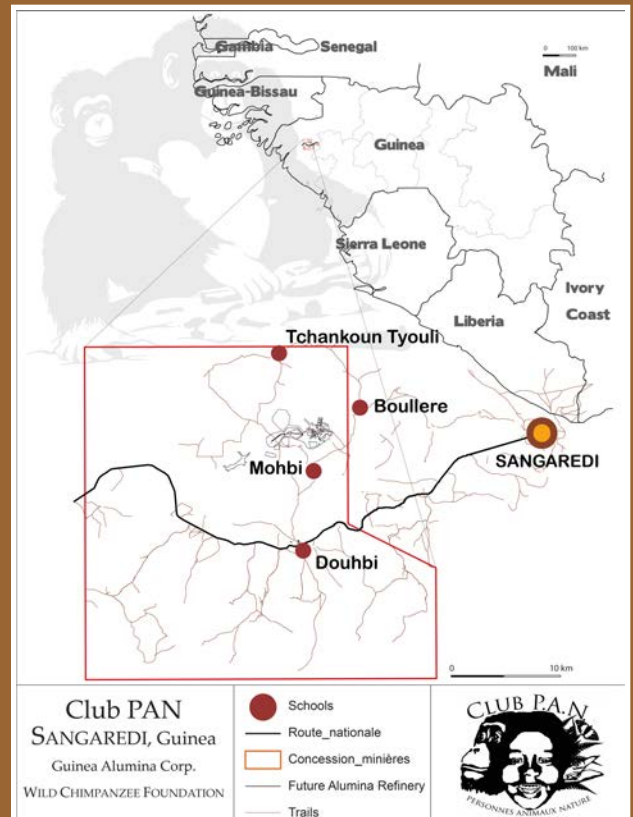
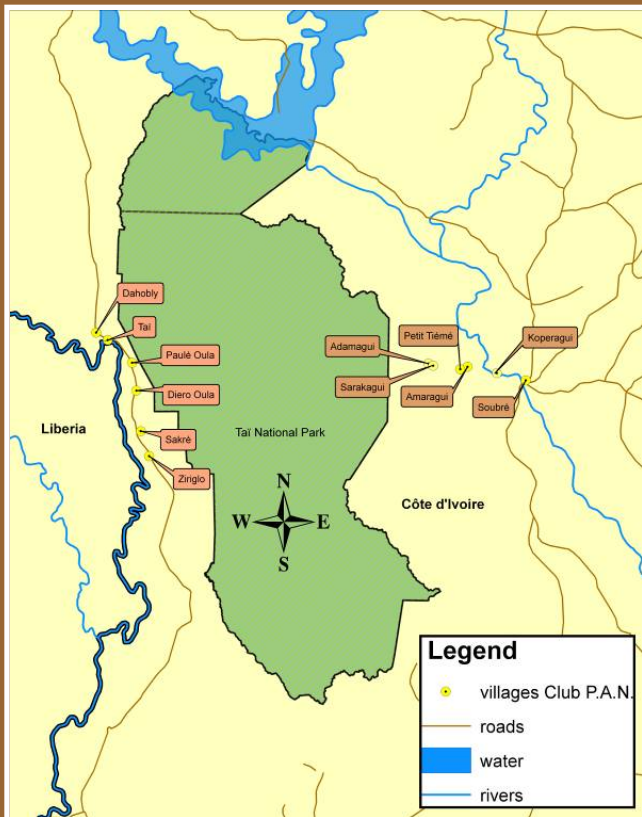
4 Club P.A.N.



The Wild Chimpanzee Foundation is working in Guinea, Sierra Leone, Liberia and Côte d'Ivoire.

Club P.A.N. is conducted in Guinea and Côte d'Ivoire.

Ten conservation education sessions are held in 12 schools around the Tai National Park in Côte d'Ivoire (left) and in 4 schools in the region of Boké / Sangaredi in the western part of Guinea (right).





4.1 Teacher training



All teachers receive intense trainings two times per school year to increase the capacity for environmental education and to guarantee that the lesson plan and activities could have the utmost impact during the school year.

The training at the beginning of the school year happend already in November 2011, the other one recently in July 2012 for Côte d'Ivoire.



The training in Guinea happend in December 2011 with the presence of the two Ivorien coordinators.

4.1 Teacher training



The teachers are incredibly motivated to learn more about biology and ecology and are keenly interested in the nature documentaries and slide shows that are presented. They also greatly enjoy the games and the experiments.



Club P.A.N. has always begun the school year with a training workshop which gathers its educational team (school directors, teachers and members of WCF/CPE), in order to train them and to plan the working schedule for the year. In the 2011/2012 school year the training took place for over 3 days in November 2011 for Côte d'Ivoire and in December 2011 for Guinea.

All participants were gathered and were trained and supervised by Mr. Guilahoux and Mr. Ouattara from the CPE.

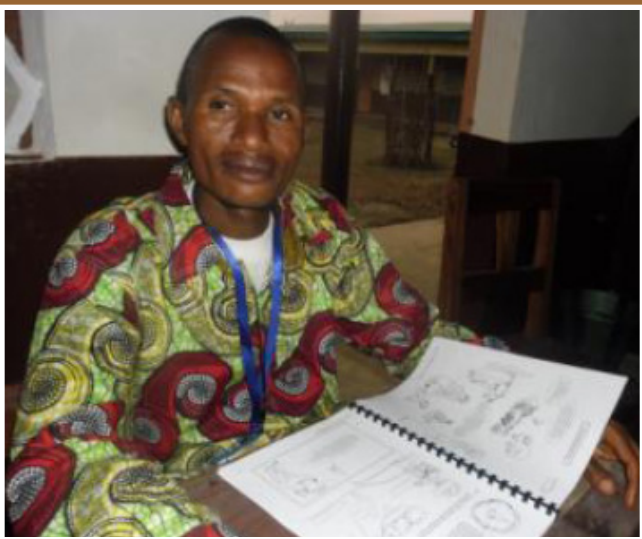
The first day was the occasion to start introducing notions such as biodiversity and conservation to the staffs, especially to the newcomers. The second day was dedicated to study the 10 topics of the lesson-books. The last day, the Club P.A.N. pedagogic methodology, mixing teaching and games outdoor was explained. In addition, the theoretical training was backed by some practical pedagogic exercises, where the teacher capacities were then commented on by the supervisors.

4.1 Teacher training



Best pictures from the teacher training in Doubi / Guinea.

14.-16.12.2011





4.2 Club P.A.N. lessons



Number of children participating in Club P.A.N. in Guinea and Côte d'Ivoire during the school year 2011/2012.



Country	School	Club P.A.N. children	Total
Guinea	Bouléré	65	289
	Doubhi	81	
	Mobhi	83	
	Tchiankoun Tyoli	60	
Côte d'Ivoire	Taï	73	754
	Sakré	84	
	Ziriglo	36	
	Paulé-Oula	47	
	Diéro-Oula	45	
	Dahobly	74	
	Petit Tième	68	
	Gabon /Soubré	72	
	Amaragui	59	
	Adamagui	71	
	Sarakagui	73	
Koperagui	52		
Total			1043

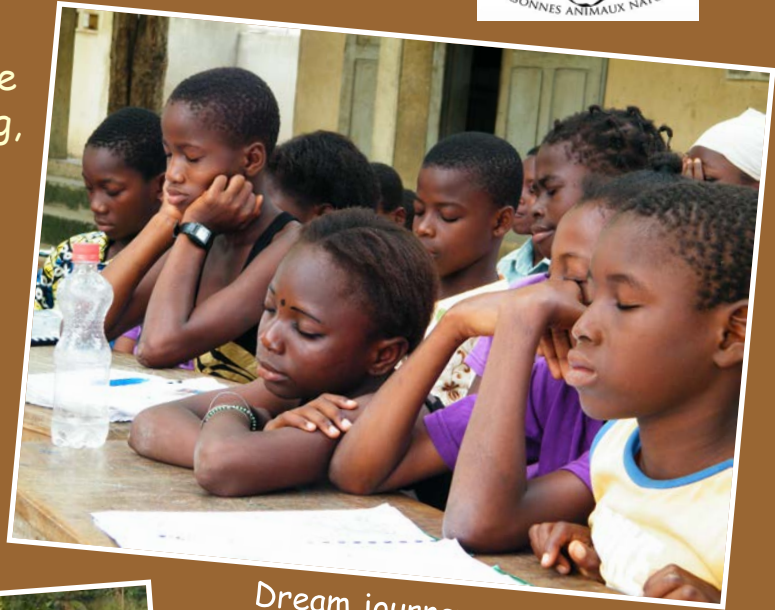




4.2 Club P.A.N. lessons

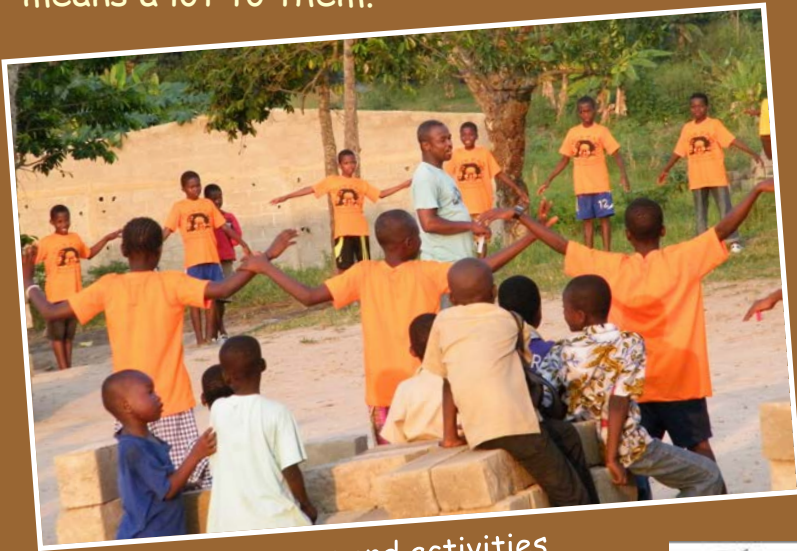


Club P.A.N. lessons typically involve fact sheets, activities, role playing, songs and games with animal puppets which are based around a chosen theme. We aim to promote positive club spirit through interactive ways of learning and essentially having fun. Each child that participates receives a Club P.A.N. book and a Club P.A.N. T-Shirt which both means a lot to them.



Dream journeys

Some lessons focus on the concepts of sustainable resource use and the need for protected areas; others detail the natural history of various large protected mammals (like chimpanzees & elephants).



Outdoor games and activities



Experiments



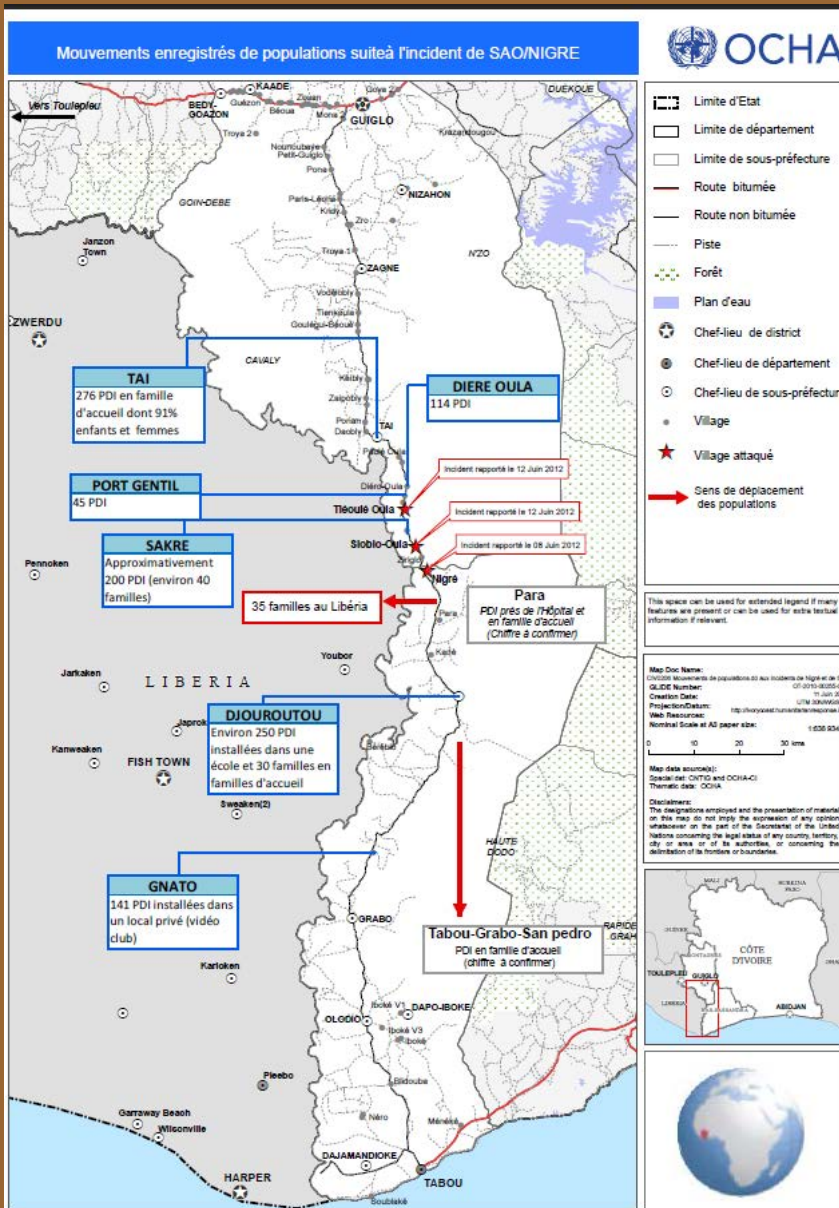
Games about habitat loss



4.2 Club P.A.N. lessons



For the fifth school year (October 2011 - June 2012), the Club P.A.N. program in Côte d'Ivoire should have been carried out, as usual, in 12 primary schools around Tai National Park. However, given the difficult post-electoral crisis, the WCF was not able to carry out all Club P.A.N. activities, due to the insecurity in the area West of Tai National Park. We were able to finish the whole Club P.A.N. program in 10 of the 12 schools. In 2 schools (Sakré and Diéro-Oula) we were able to conduct the first half of the program with the pre-evaluation and the first 5 lessons but because of intensive fighting in the region, we were not able to do the post-evaluation, the last 5 lessons and parents days.



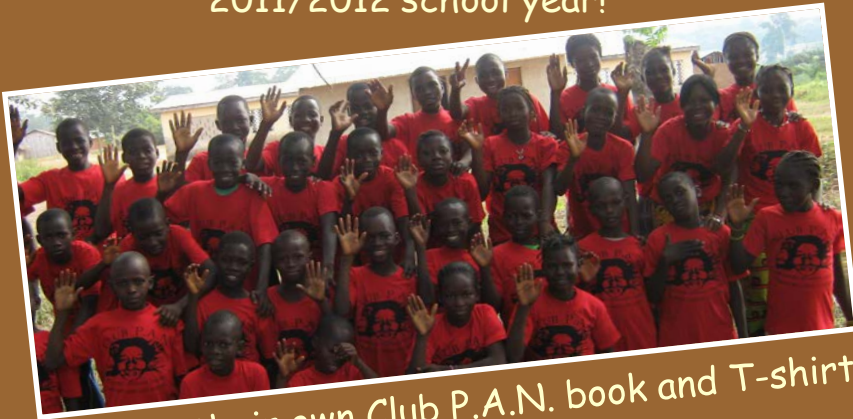
In all schools in Guinea and all other schools in Côte d'Ivoire all the planned Club P.A.N. activities were carried out: pre-evaluation of the pupils and their parents, ten Club P.A.N. lessons, the final evaluations of the pupils and their parents and finally the parents day.



4.2 Club P.A.N. lessons



Our best pictures for you from the Club P.A.N. lessons in the 2011/2012 school year!



Receiving their own Club P.A.N. book and T-shirt is the highlight for many children.





4.2 Club P.A.N. lessons



One Club P.A.N. lesson (about the tropical rainforest) in Amaragui / Côte d'Ivoire was visited by the minister of environment and a television team.

Club P.A.N. was as well in the local radios.





4.2 Club P.A.N. lessons



Ya Konan Abraham
Petit Tiémé

Club P.A.N. is the best for all children, because they can learn how to protect nature.



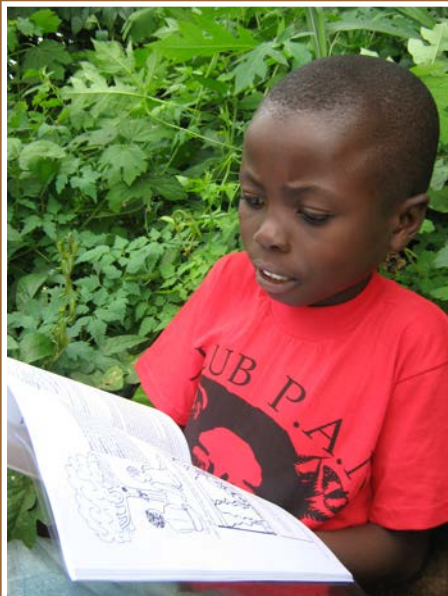
Koné Ladji
Taï

I think Club P.A.N. is great for us. We can learn so many things about animals and the forest.



Yoro Maimouna
Petit Tiémé

I learn so much about the forest and the animals. I love Club P.A.N.!



Sasso Brou Théodore
Soubré

Club P.A.N. is very important. I always want to go to Club P.A.N.!



Koré Grace Victoire
Sakre

Club P.A.N. is interesting because we learn about nature and how to protect it.

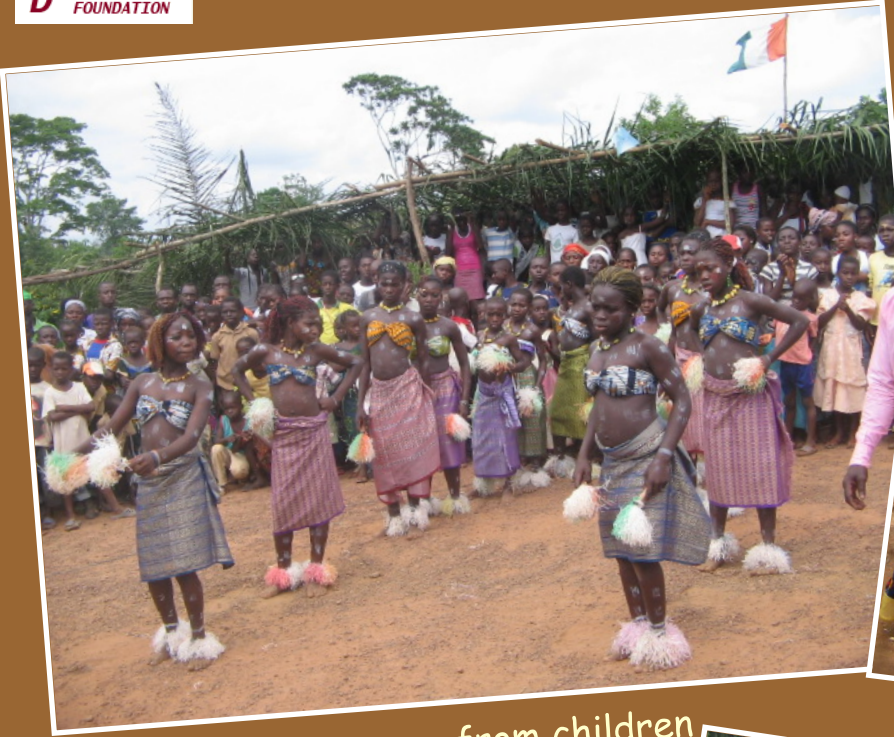


Nouminata Fofona
Paule-Oula

I am happy to be among my friends in Club P.A.N. I really enjoy the lessons, they have taught me many things that I didn't know.



4.3 Parents days



Dancing performance from children of Adamakro

Girl in Petit Tiémé



Boys from Amaragui



Theater play of the children from Sarakagui



Dancing Club P.A.N. children in Gabon



4.3 Parents days

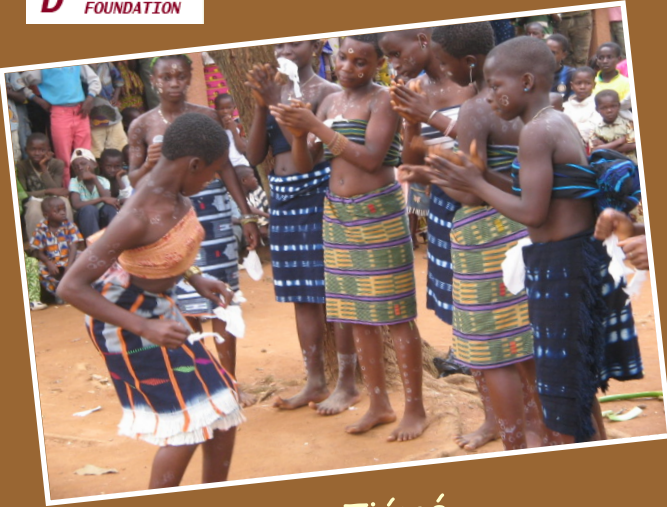


School	Parents day date	Number of spectators
Petit Tiémé & Amaragui	13/06/2012	~ 450
Gabon / Soubré	14/06/2012	~ 400
Koupérou, Adamakro & Sarakagui	15/06/2012	~ 600
Taï & Dahobly	26/07/2012	~ 250
Ziriglo & Paulé-Oula	29/07/2012	~ 200
Sakré	not possible	-
Diéro-Oula	not possible	-
Bouléré	June 2012	~ 100
Doubhi	June 2012	~ 500
Mobhi	June 2012	~ 200
Tchiankoun Tyoli	June 2012	~ 100
Total		~ 2800

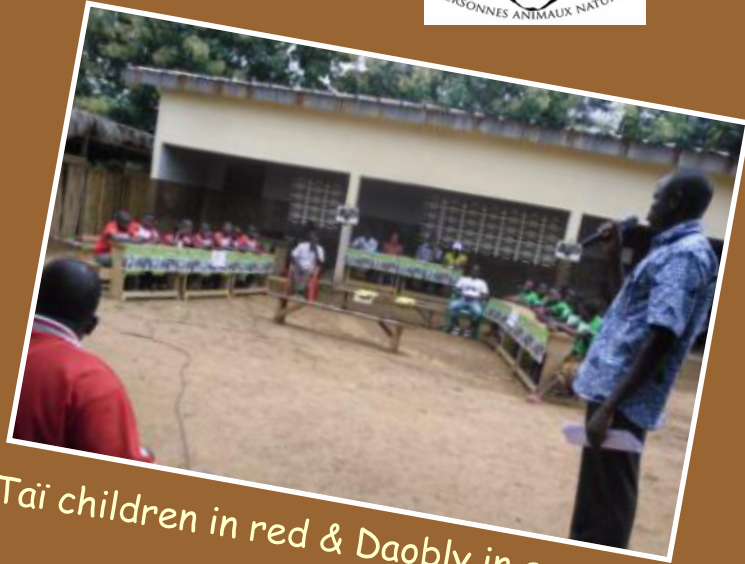




4.3 Parents days



Dancing in Petit Tiémé



Tai children in red & Daobly in green



Paulé-Oula children in red & Ziriglo in yellow



Spectators at the parents day in Koupérou



4.4 Evaluations

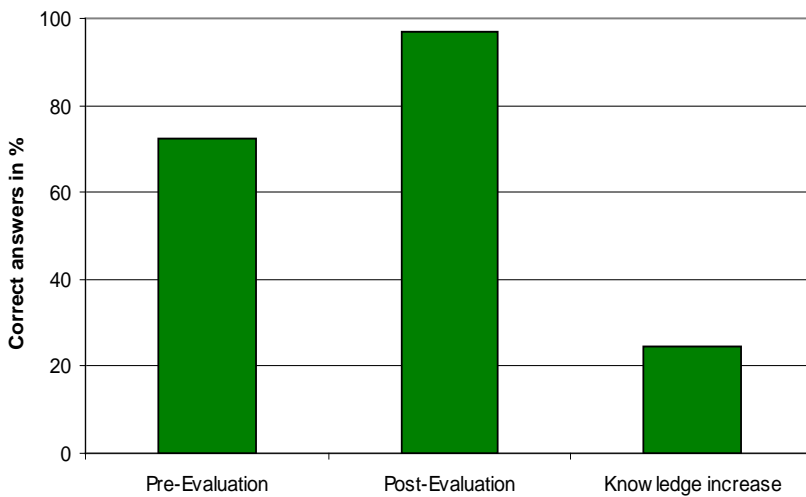


Pre-evaluations were done in November 2011 and post-evaluations in July 2012 for all children and some of their parents participating in Club P.A.N. in Guinea and Côte d'Ivoire.

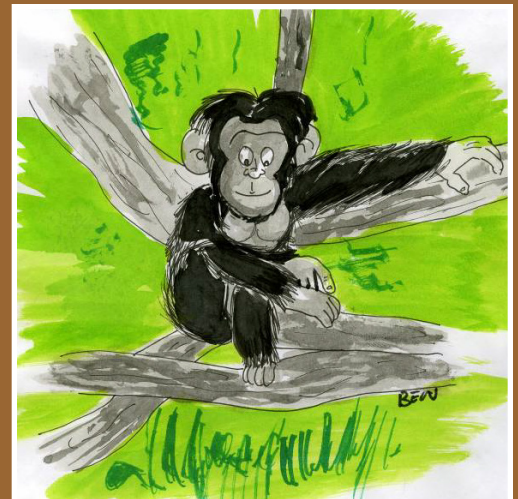
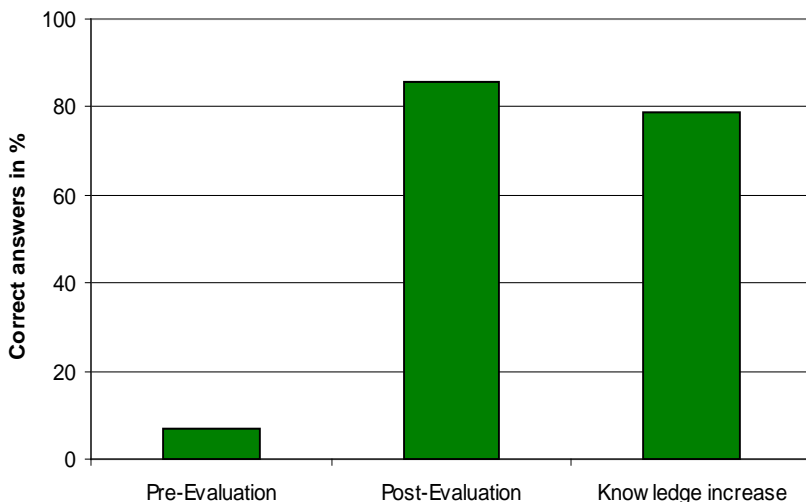
In total we had 19 evaluation questions asking for the children's knowledge about nature and nature conservation. Here we present the results of 2 multiple choice questions answered by 365 Club P.A.N. children before the nature clubs started and again after the 10 lessons.

The results show that Club P.A.N. was able to increase the knowledge of the children by an average of 52 % from all questions, not only about the local flora and fauna, but also about biological facts and global environmental issues.

Evaluation question:
Which animal is the closest living relative of the human?
Correct answer: chimpanzee



Evaluation question:
Which animal group has the highest number of species within its group?
Correct answer: insects

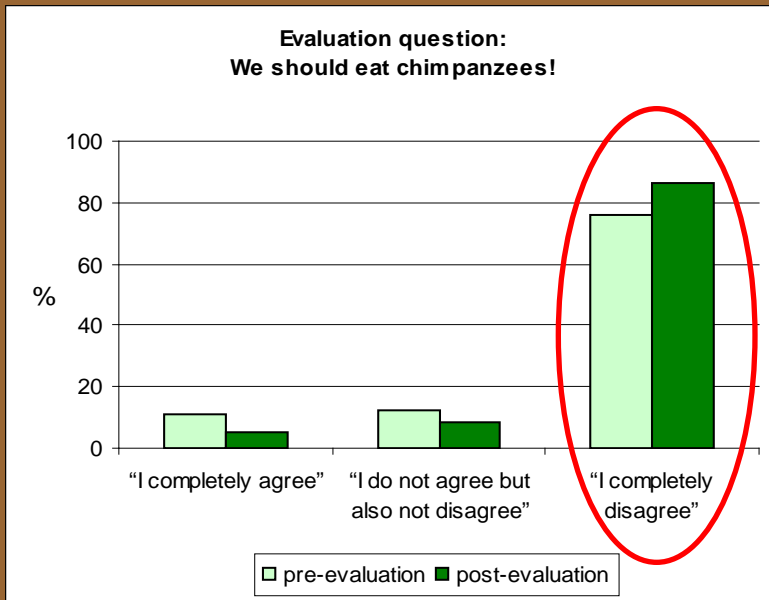




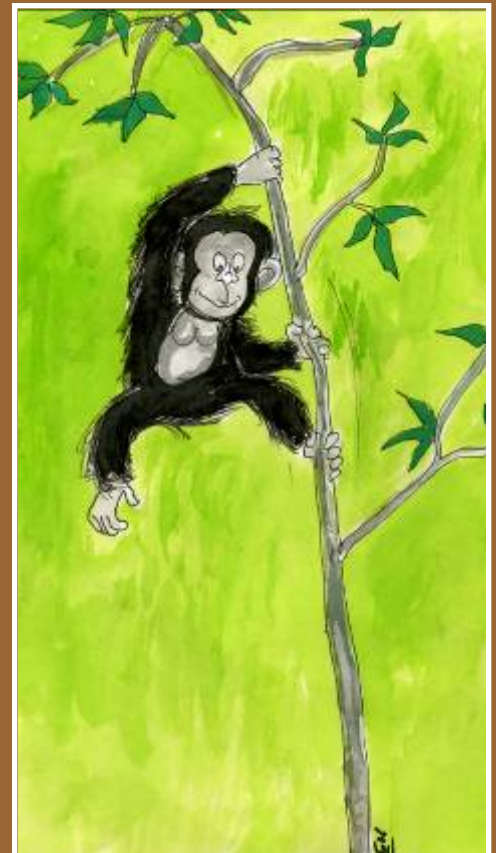
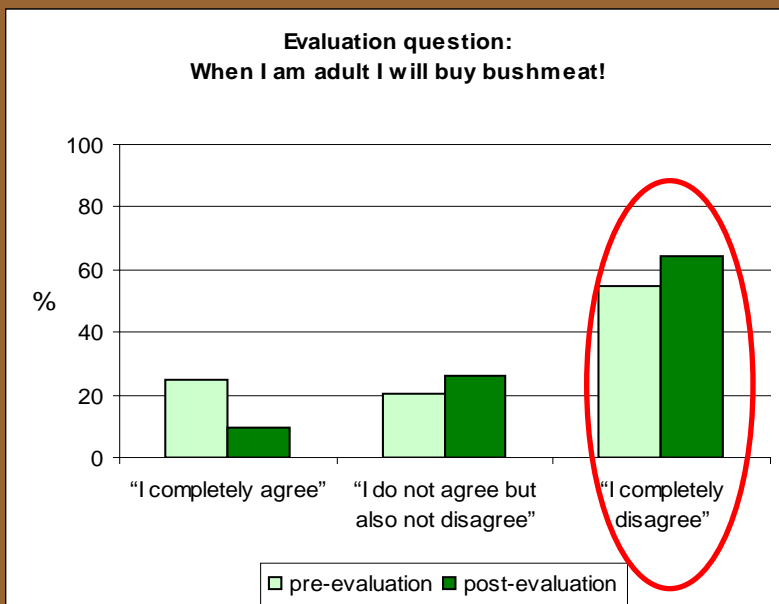
4.4 Evaluations



In total we had 20 evaluation questions asking for the children's attitudes towards nature and nature conservation. Here we present the results of 4 questions answered by ~365 Club P.A.N. children before the nature clubs started and again after the 10 lessons. The red circle represents the conservation positive answer. We used a three-point likert scale as proposed by Bogner and Wiseman (2006).



The children showed positive attitudes towards nature and nature conservation already before they visited Club P.A.N.. This positive attitudes even increased after they participated in the nature clubs.

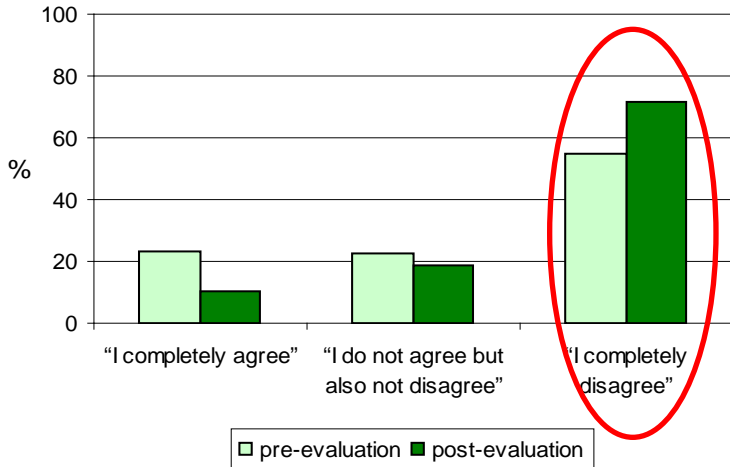




4.4 Evaluations



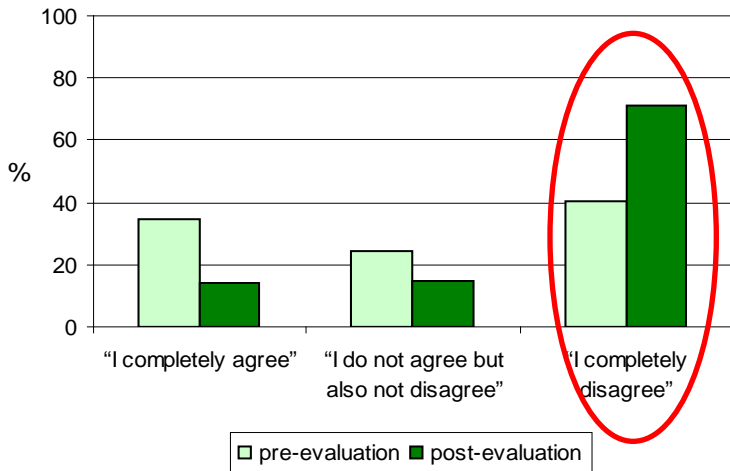
Evaluation question:
Humans have the right to modify nature!



Statistical analysis revealed that attending the Club P.A.N. program leads to a significant knowledge gain and to changes of attitudes in primary school children.

We conclude that attending Club P.A.N. can foster children's consciousness towards nature and the environment.

Evaluation question:
Hunting should be legalized in national parks!



We used a paired sample Wilcoxon test to analyse the changes of attitudes.

	Z	N	Ties	Total N	P value
Hunting should be legalized in national parks!	-7.7	191	165	356	0.000
When I am adult I will buy bush-meat!	-4.3	155	194	349	0.000
We should eat chimpanzees!	-3.4	98	258	356	0.000
Humans have the right to modify nature!	-5.2	166	187	353	0.000



4.5 Micro-projects



Micro-projects were established in schools to teach children farming techniques of fish, snails and cane-rats as alternative protein sources compared to bush meat.



Cane-rats in Petit Tième, Wonsealy & Tai



Fish in Dahobly



Giant Snails in Sakré & Djouroutou



So far not all schools received a micro-project but this is one main focus for the future of our work. Only if we can present and teach alternatives to bush meat hunting the children will find a way to live in harmony with nature in the future.



5 Conclusion

Goals	#1	#2	#3	#4
	Teach children about the local flora and fauna, so that they appreciate the biodiversity that exists in their region.	Teach basic knowledge on environmental issues in order to promote care and awareness towards nature conservation.	Discourage the trade in illegal bushmeat by reducing the likelihood that the current generation of children will consume or trade bushmeat in the future.	Promote the conservation and research activities undertaken within the countries.
Results	Increased knowledge regarding the local flora and fauna.	Increased knowledge regarding environmental issues.	Students are able to identify the conflicts between humans and animals. Changed attitudes regarding the consumption and trade of bushmeat.	Knowledge and support of the conservation and research activities.
	√	√	√	√

Our evaluation results showed that Club P.A.N. was able to increase the knowledge of the children, not only about the local flora and fauna, but also about biological facts and global environmental issues. Furthermore, we were successful in changing attitudes and we were able to create a fun and dynamic learning environment that the children enjoyed.

A detailed analysis of our evaluations by the PhD student Claudia Borchers is currently submitted to an international peer reviewed journal and will hopefully be published this year.

Club P.A.N. was able to reach the future generation and created an environmental awareness in primary school children and their families. A total of 1043 children and their families were reached during the 2011/2012 school year in Guinea and Côte d'Ivoire. Around 2800 spectators visited our famous parents days this year.



6 Outlook



Time table of all Club P.A.N. activities during the school year 2012/2013

Club P.A.N. Event / Time	10/12	11/12	12/12	01/13	02/13	03/13	04/13	05/13	06/13
Teacher training									
Pre-Evaluation									
Lesson 1-10									
Post-Evaluation									
Parent day									
Teacher training									
Data Analysis									

Despite the very difficult situation this year in Côte d'Ivoire, the Club P.A.N. has been fully active in 10 schools around the Tai National Park and in 4 schools in Guinea.

Because each school year we have new children joining the nature clubs and long-term conservation education programs have been shown as efficient to change local attitudes (impact analysis carried out in year 3), the WCF will continue the nature clubs for a sixth school year in Côte d'Ivoire and a third year in Guinea with the potential to increase the number of participating schools and also increase the number of micro-projects connected to the Club P.A.N. schools. At this time, we are currently looking for funding to complete all the needs a full school year requires.

We are proud to say that the Club P.A.N. program is expanding, having recently been implemented in Guinea. We also plan to expand this promising program towards Sapo National Park, in Liberia, as part of the WCF's transboundary approach to the Tai-Sapo Forest Complex.





7 References



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8 Acknowledgements



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We thank the Ministère de l'Environnement et des Eaux et Forêts et the Ministère de l'Education Nationale of Côte d'Ivoire and Guinea for permitting Club P.A.N.. We would like to thank our two long term Club P.A.N. coordinators from the CPE in Côte d'Ivoire Mr. Guilahoux and Mr. Ouattara for supervising the Club P.A.N. in Guinea and Côte d'Ivoire. Thanks as well to our new Guinean coordinators: Mr. Kaba and Mr. Diallo! We also thank all teachers, principals, parents and children that made Club P.A.N. such a successful environmental education program.



The report was written by Julia Riedel and Claudia Borchers.