

Report from Community Conservation on Primates in the Western Region

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Prepared by Dr. Robert H. Horwich, Community Conservation
for the Coastal Resources Center, University of Rhode Island



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For more information on the Integrated Coastal and Fisheries Governance project, contact: Coastal Resources Center, University of Rhode Island, Narragansett Bay Campus, 220 South Ferry Road, Narragansett, Rhode Island 02882, USA. Brian Crawford, Director International Programs at brian@crc.uri.edu; Tel: 401-874-6224; Fax: 401-874-6920.

For more information about Community Conservation, contact: Dr. Robert Horwich, ccc@mwt.net, and visit <http://www.communityconservation.org>

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I. Primate Forests of Western Ghana (2011)

Background

As part of efforts to improve management of the last remaining coastal forest in the Western Region, Hen Mpoano is focusing on the primate habitat aspect of these forests. This report documents recommendations from a primate expert, Robert Horwich of Community Conservation, who visited the region and met with local communities to discuss ways to improve monitoring of the forest reserves and community welfare in the region.

Western Ghana has a number of endemic primates that are found only in Ghana and a few nearby countries. These include the olive colobus (*Procolobus verus*), Geoffroy's black and white colobus (*Colobus vellosus*), the Rolaway monkey (*Cercopithecus diana rolaway*), the white naped managabey (*Cercocebus atys lunulatus*), the lesser spot nosed guenon (*Cercopithecus petaurista petaurista*) and Lowe's guenon (*Cercopithecus campbelli lowei*). There is some evidence that Miss Waldron's red colobus (*Procolobus badius waldroni*) may not be extinct as previously thought. There are also two nocturnal primates that are probably in the forests, the potto (*Perodicticus potto*) and the Demidoff's bush baby (*Galagoides demidoff*).

Horwich's first program was to visit Monkey Hill and come up with some ideas about helping to turn Monkey Hill, a forest within the city, into a tourist attraction. It has a number of facilities including a hotel and restaurant that are now owned by Vodaphone that has recently taken ownership of some of the area. Horwich met with members of Friends of the Nation and some community members of New Takoradi. With their help he observed the forest, its primates and other aspects of the forest. It is a nice forest but some residents use it as a garbage dump and latrine. Some initial suggestions are to involve the New Takoradi school children to begin to clean up the forest and to work with civil authorities and Vodaphone to create a better garbage collection system within and surrounding the park and to install some composting toilets around the periphery of Monkey Hill. Additionally, some low cost educational trails could be easily set up for tourists and local use. A guide system similar to that used by the Community Baboon Sanctuary in Belize could help create some income for local guides.

Cape 3 Points is the last remaining coastal forest in Ghana. Although there has been some logging, the main problem for primates has been in hunting for the bush meat trade that has reduced the primate populations considerably and made the monkeys shy and hard to see. There is a small tourism industry in the area involving mainly European tourists who come to see the forest, a waterfall, the beaches the lagoons and some architectural buildings that include the lighthouse in Cape 3 Points and a German castle built in the 1600's in Princesstown.

In 2011, Horwich, accompanied by local villagers visited all of the villages around Cape 3 Points Forest Reserve to show them relevant examples of community conservation projects in Belize

and India with a question period to find out about the needs of the villagers. Following these village meetings, CRC organized a community meeting inviting two members from each village. There, the villagers discussed the successes and failures of the Ghana laws that cover community management of natural resources. What evolved from the meeting was that the communities were willing to help protect the forest but they wanted help in developing their livelihoods.

This report includes field notes from Horwich's site visit and recommendations for improved management of the forest reserves and alternative livelihoods for the adjacent communities. Horwich made two additional visits in 2012 which are also included in this report.

Field Notes: Monkey Hill Reserve Forest, Takuradi, Ghana

I spent two days walking the Monkey Hill Forest Reserve in Takoradi, Ghana, with watchman and guide Alex Tetteh. During the walk from 9:30 to 4:30 we sighted lesser spot nosed guenons four times, and a lone olive colobus monkey once. Most of the time was spent walking in the forest with a trip to New Takoradi for an overview of Monkey Hill and the wetlands.

On Friday, we continued the search at 6:30 to 11:30AM. During that time we saw lesser spot nosed guenons two times, encountered a troop of mona monkeys once and followed a troop of olive colobus monkeys for about an hour. During the latter part of the morning we were accompanied by a friend of Alex named Jeff who seemed to have a fair knowledge of the forest reserve plants and an interest and knowledge of herbal uses of the forest.

Monkey Hill Description

It is a 31.5 acre forest reserve that has a great deal of secondary forest, some of which contains larger trees. Behind the Dicfarm Hotel there is a group of immature palms that floods in the wet season. We encountered some spot nosed guenons feeding on the soft fruit covering of the palm fruits and the troop of olive colobus monkeys passing through headed in the direction of the Dicfarm Hotel. The forest has a great deal of under story and observing all of the monkey species was difficult due to the dense vegetation and understory and the shyness of the monkeys to humans. The forest has a number of tree species that regrow when cut which may be important for the olive colobus monkey leaf diet. There are a number of places where monkeys can cross the major thoroughfares and can travel outside of the forest reserve boundaries.

Problems

The forest reserve is a nice forest with a great potential for education and tourism. The main problem is a lack of interest on the part of the city inhabitants that is compounded by the use of the forest as a garbage dump and as a latrine. Throughout our travels we came on places where people had left large quantities of garbage including some large items like TVs and windows. There were many areas where people had used the area as a latrine. There were also indications of the use of the forest by homeless or indigent people.

Community Interest from New Takoradi

On Friday, I met R.K. Dadzie from New Takoradi with Chris. Ali drove me to New Takoradi and left me with Mr. Dadzie who took me to the home of E.A. Biceure. We talked about a plan they had written with a group including the Tourist Board, Vodaphone, STMA (Township government), Friends of the Nation, the local Chief and the Community Executive Board. There may not be any existing copies of the plan but Mr. Dadzie will enquire about it from the Tourist Board. The Plan was about how to improve Monkey Hill, how to fence the forest reserve in order to control access by the public in order to charge an entrance fee, how to prevent public access, how to best use the forest as a resource and how to involve the water sanitation board to include the wetland area.

I suggested that they get the group together again and to create a new plan or recreate the original plan and that I would be happy to work with them when I returned to Takoradi. I suggested they make a modest budget with priorities and the proposal could be used to solicit help from Vodaphone and the Township government. Although I did not discourage the idea of fencing the forest I suggested that in addition, Vodaphone and the Township government should come up with a public campaign to focus on changing how the community sees Monkey Hill Forest Reserve. The fence that was partially built a few years ago has breaks in it and the public are able to dump garbage on the forest reserve side and in some cases dump it against the fence.

I suggested that in changing the forest image they try to invite people into the park rather than keeping them out but to encourage changing how the community sees the Monkey Hill from a place to dump garbage and use as a latrine to a more positive image as a local resource of a park within the city that could be used as an educational resource for local schools and for a tourist attraction. I made suggestions to them which are included in the recommendation section.

Recommendations

It will be important to enhance the image of the forest reserve as a first step to developing it into a useable resource for education, tourism and conservation. A public campaign by CRC, Friends of the Nation, the township government and Vodaphone with signage, news articles, and radio programs should begin the process. A similar campaign should be tried to change the behavioral use of the forest. This will be more difficult and might involve the municipality to take a stance to improve the park image and provide utilities to change public behaviors. These would include enhancing and promoting garbage collection and disposal within the park and at the periphery and providing some public toilets around the periphery of the park with a public campaign and signs promoting use of the facilities and respect of the forest. There should be composting toilets that would be advertised as such in accord with the forest protection venue. Quezi of Ecolodge in Cape 3 Points is an architect with knowledge of simple green building techniques and building and maintaining of composting toilets. Rather than an entrance fee I suggested a plan that has been successful in the Community Baboon Sanctuary in Belize where tourists are required to have a local guide at least for the first visit which would include a payment for the guide with a

percentage going to the management of the park.

It could be flexible if the tourists wanted to use a self-guided tour that could be easily set up. In that case they could set an entrance fee to allow those tourists that desire to wander along a marked trail. Such a self-guided tour could be set up for a minimal cost. Using local naturalists, a series of “exhibits” could be set up by the use of movable numbers set on metal stakes inserted in the ground at appropriate areas. These numbers would be placed along a trail where monkeys might be most easily seen. Exhibits would include special trees, medicinal herbs, tree and ground termite nests, areas where certain wildlife can be more often seen such as areas where vultures are more apt to roost or feed or potential flight areas of hornbills, rodent dens or monitor lizard trails etc. The numbered exhibits with a description of what to look for and an explanation of the plant or animal information would be printed and laminated for use by tourists to be returned after use. Or it could be part of a booklet about Monkey Hill that could be produced and sold to tourists. Part of the philosophy of initially not having a set fee or a sliding fee is to encourage local people to use the forest properly as a resource rather than trying to keep them out.

The positive campaign can be embraced by the municipality as a beautification campaign that encourages tree planting of native tree species along roads by students or community groups. The groups can create tree nurseries within the park grounds or at the schools or communities and label them as native species. Most of the trees along the roadsides I believe are not native. There are nim trees from India and a tree with layered branches which I have seen in other countries called almond trees that despite being non-native are good for monkey food.

Tree planting can also have an additional function that may be controversial but that might have a long term positive effect on Takoradi’s reputation. Currently there are areas that the monkeys use to go outside of the forest reserve, where they have aerial pathways across the city streets. There is no way to stop that short of creating treeless boundaries and even that will not work if the monkey population increases. My suggestion is to encourage native food trees radiating out of the park as part of city beautification and creating monkey corridors. The controversy mainly focuses on the lesser spot nosed guenon that is a nuisance by feeding on local crops such as maize, plantains, bananas, mangos and avocados. Fortunately or unfortunately, I have heard of people living inside or on the edge of the park who encourage this feeding. If a corridor program were successful and hunting of monkeys is curtailed and the monkeys become acclimated to people, Takoradi could develop a reputation as a “monkey town” that encourages monkeys birds and other small wildlife within the city and would give it a unique reputation within Ghana.

Field Notes: Cape 3 Points Forest Reserve

Western Villages

I spent five days working with Roland Acquah and Daniel Arthur on the western fringe villages of the Cape 3 Points Forest Reserve. We planned to make three trips: the first to Asuboi, Nkwantanan and Silmowu in Asuboi the second to Adazlazo and Animkrom and the third to Tumentu and Abease in Abease. All three village meetings were quite well received with an attendance of 18, 22 and 20 people at the respective meetings.

At each meeting I first noted that many conservationists believe that local people are the problem with deforestation and lack of wildlife. I said that I believed, and in some cases I knew, that local villagers are the solution, or can be if they decide to be. Then I told them that I wanted to tell them two stories of villages in Belize and India and discuss with them a third story of what can happen in Ghana and how we can work together but we need their help because the government cannot do it without them. The first story was the Community Baboon Sanctuary in Belize. It was relevant to Ghana because the people in Belize were Creole descendants of ex-slaves that were taken from West Africa, people perhaps their distant relatives. I used pictures so they could see the people and things that were going on in Belize. I talked about how after the people had helped me, I asked what I could do for them and their reply was that I could help them to develop tourism. I noted that the village when we began was not so different from their villages in Ghana and many people were still living in traditional thatched houses. Although there were places to get meals and drinks, there were no signs for a tourist to know where to go. I explained that within 5 years there were 3000 foreign tourists coming and another 3000 Belizeans mostly school children from the capital, Belize City, coming to see the howler monkeys called locally "baboons". The city children who were not knowledgeable about the forest thought they would see caged monkeys. I noted how the monkey population increased as well.

In the second story I said that the people were different but the situation was similar to Cape 3 Points. The people were Asian, originally from Tibet and the political situation was dangerous because the Bodo tribe were seeking autonomy and were threatening, killing and kidnapping government and Forest Department workers. Then in 2004 the militants settled with the central government and began to administer a large region under the Assam state government, perhaps the size of Ahanta District. I showed pictures of how community Forest Protection Forces divided the forest to protect the whole region and that due to community protection the population of the endemic golden langur monkey increased from 1500 to 5600 monkeys. Then I showed them a Forest Reserve of 17km² that was isolated and surrounded by 34 communities. Each village began patrolling and protecting specific areas in the forest. Eventually they protected the whole forest forming 2 federations. The forest which was almost totally deforested (5% canopy) I originally suggested that we abandon as hopeless. But the NGO who discovered

golden langurs there said we must try to save it. Within 10 years the forest had regained a 70-80% canopy and the langurs had increased from fewer than 100 to over 500 monkeys.

Then, I showed them the topographic map of the Cape 3 Points Forest Reserve and how it was similarly surrounded by communities and we needed their help in protecting it. Many of the discussion points and questions that were brought up were relative to their situations. One woman asked “what do we get from the forest?” I responded that in the Indian situation the Forest Reserve had a stream that was dry seasonally but now because of the community reforestation it flowed all year round and they were trying to grow a second crop of rice. Both Daniel and Acquah also gave their responses. Another question was how would they show that they were official protectors. I responded that we would request for official picture IDs, eventually giving them special status as CREMA forest guards. They asked about pay and said they would like to see official paid forest guard jobs go to local villagers. My answer was that the villagers may have to create a working system of forest protection that would build the CREMA reputation so that they would be negotiating with government from a point of strength and a system that was working. Although I did not discuss it with the villagers I have information from the Indian project and from Namibia that show that community conservation systems can protect the forest at less than 1/10 of the cost of traditional conservation systems.

A woman at the third meeting suggested organizing a group of men and women to patrol the forest. I told her a story of a group of 82 women in south India who were now patrolling the forest in Periyar sanctuary where I visited many years ago. The women were protecting tigers in areas that they were afraid to go because of the animal’s size and reputation. When their husbands asked why they were doing this as volunteers, they said because it is their duty to protect the sanctuary for India.

Eastern Villages

I met with the Chief of Cape 3 Points on Sunday. I tried to get information on the history of the Cape 3 Points Forest Reserve without too much success. The government took the lead in 1948 to form the Forest Reserve before the current Chief was in power. There was some dispute over boundaries between Princesstown, Cape 3 Points and Akwida. The decision was agreeable to Cape 3 Points but Princesstown and Akwida may have used the forest at that time.

I then met with Bernard Kaunda Cudjoe on the seaside and we were joined by Paul Cudjoe, Charles Akulo and Richard Arthur who were curious about my presence. We discussed what I said in the western villages and it was agreed that I should try a similar approach in the eastern villages. We set a schedule for three days of approaching adjacent villages with the fourth day to be a forest walk.

On Monday, I awaited the Tro-Tro which was to leave at 5:30. At 6:00 Bernard came walking to let me know that it had left at 4:30 on a special trip for the fishmongers. I used the time with Bernard to ask him about what he thought of a plan of community protection and what would be

the minimum that a local man or woman would accept as a salary as a forest guard. He replied that might be C5.

The Tro-tro returned at 7AM and we got off at the Ketakor turn off and walked to the village. We contacted a man who described himself as the village resource manager who organized the village turnout and helped with translating my talk. The gathering was held on the seashore with a gathering of 36 men and women accompanied by children. I first indicated why I felt the communities were the solution to and not the problem of deforestation and loss of wildlife and I asked for their help. I described the Belize project with reference to them being originally from West Africa and then the Assam project followed by requesting their help in protecting the forest. I mentioned that I wanted to see a strong CREMA and Village association that could protect the forests better than the government. I showed the map of the C3P Forest Reserve and showed how it was similarly situated being surrounded by villages that similar to Assam could each patrol and protect specific areas with the intention of protecting the whole Forest Reserve. As often before, people asked what they get from the forest and I described the Assam situation that now had a stream running in all seasons and would be used to grow a second rice crop. I also noted some of the things they got from the forest and that Ghana was not just its people but the soil, the farms, the forests and the wildlife. I have been careful not to promise anything except that I would work to help them protect the forest and to help them to improve their livelihood because we wanted a strong partner in protecting the forests. I mentioned and described the small grass cutter operation I had seen in Abease and a program of chicken production in Assam as well as other alternatives like snail production and soap making and honey production that I was aware of in Ghana. I made a special point to say that I had no money to give and they should not see all white men as having such resources but that what I had was better since together we could come up with ideas and plans to help them.

When we left, Bernard guided me along the coast to Akwida Village and I was able to see Esile Bay and the hotel there. We went to the old part of Akwida across the bridge and talked with 16 men in an area where they were mending their fishing nets. It contained some of the elders and a larger number of young men. I gave the same talk with some of the same questions. One young man (Morrison) who said he made his living cutting trees with a chain saw said he would be interested to learn the business of grass cutter production. We got many of the same questions and responses but in general the mood was positive. Since we were in a fishing community I specifically mentioned CRC and how they were looking for sustainable use of the fish which would be gone if such a solution were not resolved.

On Tuesday, we attempted to get the Tro-Tro that was full and was able catch a ride with a local man who was going to Algona. We visited Chavene community first, meeting at the seaside with 23 participants. Our presentation went well although there has been a recurrent critique of the failure of a revolving loan that has been brought up again and again. I explained how revolving loans worked and how if the initial recipients do not repay the loan it destroys the system for everyone and that I experienced the same situation in the Belize project. We then walked to

Komanfo Krom community and enquired to gather an audience. I was not willing to start because the initial gathering had mostly just boys and very young men. Finally with the addition of some elders and women and a total of 21 participants, we began. It was also well received but the revolving loan came up again. Additionally, we had the request for training in creating fish ponds and there were still some residual comments on wanting me to give them money on the part of a young man. I responded quite strongly that that was not why I was there but rather to help them with starting their own livelihoods. There were 21 participants and John M. Gadzie did most of the translation and seems to be a good contact in that village.

On Wednesday, we took a private car to Nthakron community. We gathered 31 participants and I started the presentation Richard Arthur, the driver from the Cape 3 Points Cebag, took control of the translation and was very quick and emphatic. Francis Prah listed the participants and he traveled with us to Boekrom community. The three of us walked to the meeting hall in Boekrom and we began the session as always. However, most of the men worked on the rubber plantation so it was mainly women who came and began signing up with Francis. Unfortunately what happened was a frenzied signing up (91 people) and requests for me to take their pictures. Since it looked like it wouldn't settle down and people were moving off I requested that Bernard tell the people why I was there. Both he and Francis who had heard me earlier continued to tell people why I was there and to ask their help in protecting the forest. Since there was no real presentation the list has no real relevance. After we left Bernard had decided to request that Francis take the message to the small community of Aluaso, which he agreed to do.

Recommendations

CREMA Forest Protection Forces

Forest Protection Forces should not be considered a sustainable occupation since there are no saleable products but rather it is a direct cost of governmental conservation and eventually the expenses must be picked up by the government. The long term goal is to help the CREMA to develop a strong organization to work with the Forest Department to protect the Cape 3 Points Forest Reserve. Initially we would work with the various communities to develop forest protection forces to patrol specific areas of the Forest Reserve. The idea would be to have at least two persons patrol the town's stipulated area every day. If enough people volunteered, the volunteer work may only be one or two days per month. If there was a chronic problem of resistance by specific encroachers, then the town or towns would confront the encroachers in a larger force to get the message across and to assert the CREMA's strength and ownership. Eventually the CREMA steering committee would develop a plan of what jobs need funding to maintain a strong CREMA forest protection force. This might mean funding a number of permanent CREMA forest guard positions and a schedule of CREMA meetings perhaps once every two months to discuss the effectiveness of the system and how to improve it.

Forest Protection Force Potential Plan

The following recommendation (see Appendix for more detail) is based on experience with the Assam project and to a lesser extent of a Costa Rica project. It should only be implemented after discussions with the Ghana Forest Department with some knowledge of their guard salaries and their potential future budgets, etc. I asked Bernard what might be a minimum salary that a community forest guard might be willing to accept. He said C5/day, which is what is paid to rubber workers. Based on that information, I would try to employ one forest guard under the CREMA administration for each village. However, Bernard favored sharing the job by the CEBAG members on an alternating basis so all would share in some of the money. This CREMA guard or CEBAG group should help to build a small bamboo and mud dwelling as a base camp adjacent to the forest for the village forest protection volunteers and guard to rest and cook communal meals, mainly lunches. The idea would be to create a sense of social camaraderie as in Assam between members as a social incentive. Beside the cost of the village CREMA guard a small stipend per week would be allotted for cooking lunches for the guards and to promote working together. Meetings with nearby CEBAGs would be encouraged again to promote cooperation between nearby units. All CREMA staff and CEBAG volunteers should be given laminated photo ID cards to wear when on patrol and where possible all staff and volunteers should have a minimal uniform such as a T-shirt. A long term goal would be for these guards to have a full uniform and kit which costs about C50. These staff and volunteers should get training from the Forestry Department and possibly retired army volunteers before beginning patrolling.

Daily patrols of two men or women should be the protocol and the patrols should be carried out every day in the area designated by the community and CREMA as the area that they are responsible for. Each daily patrol should record the following records: time of start and end of patrol, members of patrol, interactions with encroachers, confiscations, warnings, etc. They should also record occurrence primates and other species with troop sizes and numbers of males, females and young if possible and where located once we have a map of the patrol area.

Monitoring of Primates and Other Species

Monitoring of focal species is important to show the success or lack of success of the project. Thus it is important to get baseline information before or at the start of the conservation intervention to show the success or lack of success of the conservation intervention. Estimating primate densities is most often done by a professional by proceeding along laid out routes and estimating the distance on either side of the route and counting the monkeys encountered within the area of the route and the estimate on either side of it. This gives an estimate of density of monkeys per km² or per hectare. However, we have found that the local communities often know a great deal about the area and can help with initial estimates of primate groups. Then using GPS location, estimates of sex and ages and numbers of each troop we can get an estimated 85-95% of monkeys in the area. Using trained community participants and walkie-talkie GPS units, groups of villagers can systematically locate most of the groups living in a forest. The amount of time

spent depends on the facility in obtaining accurate counts. In Cape 3 Points, because of the history of hunting it will be difficult to get accurate group censuses. As the monkeys become acclimated to humans and show less fear from hunting, the accuracy will improve. This community monitoring will be more accurate with the help of the Forestry department staff that have been trained in primate censusing.

Other species monitoring that might be tried would include breeding bird censuses if the expertise for training is available. In northern climates local birders know when the main male territorial/breeding calling peaks. That is the time to census selected species. Species to monitor may be selected based on the conservation importance of a species or on the ease in identification of a species, especially in community monitoring where the sounds may not be so familiar to community members. The numbers of calling males during the peak season along a prescribed trail or area would give a rough density as in the primate censuses noted earlier. If done each year at the same time a relative density could be determined each year indicating a loss or gain of breeding males in the species monitored.

Securing the Cape Three Points Forest Reserve Boundary

Rather than spending a great amount of time clearing the border of the Reserve Forest each year, I suggest that all the communities alternately plant raffia and abet palms around the boundary. The pattern would be recognizable as the boundary but would also be marked with metal signs stating - Protected by Cape 3 Points CREMA. Those palms in the future could produce nuts for oil, leaves for thatch and two kinds of palm wine, the profits of which would go to the CREMA.

Livelihoods

Grasscutter Farming

Although I have little experience in Ghana I have sought to learn what has already been tried with some successes. The man in Abease with the grasscutter business said he was trained by the Ministry of Agriculture who I believe purchased the materials for his cage. I was told they now only work with groups of men and women wanting to produce grasscutters as bushmeat. The cage was about 12' x 7' with a cement base and wall about 4' tall with screen mesh extending higher with a bamboo structure. There were three levels of cages with the grasscutters loose on the ground level. According to the proprietor, they reach adult hood at about 6 months and breed three times a year with about five young. The female must be separated when she is pregnant or has young to protect the young from the male who will kill them until they are about two months old. They do not need water as the proprietor noted they do not drink and the water level he provided never went down. He feeds them twice per day mainly wild cane which he planted nearby the cage for convenience. He said the market price for the juveniles was C26 and for adults was C50-60. From my calculations someone could start a grasscutter business for C0 to C200. The cement cage and screening would cost about C100 and purchase of breeding stock would cost about C100. However, I think an adequate construction of mud and bamboo would

work with bamboo woven mesh above 4' to prevent the grasscutters from escape. Since grasscutters are plentiful in secondary growth and rubber plantations, breeding stock could be trapped. This would also maintain a better wild genetic stock which might be important if they escape. I don't think domestication is necessary since they seem to be easily handled but like many herbivores are easily frightened.

Poultry Production

One of my co-workers, Arnab Bose, a self-taught excellent community conservationist and community organizer has devised a system that he is currently trying with the communities around the Kakojana Reserve Forest which I have been using as an example similar to Cape 3 Points Reserve Forest. He calls it "Hen Can Save Man" and I will be helping him write it as a booklet that we will post on the web. The specific details are not all here but I will describe it as I understand it. His NGO sells a villager four hens for the price of one hen with the understanding that they will participate in the project as follows. The chickens can be free-ranging at first or in the day time where they can breed with village roosters. Eventually a nocturnal roost will be needed to protect them from predators. A local town veterinarian trains a para-veterinarian from each village who is supplied with simple low cost drugs that can cure common problems in the chickens. He is paid a small fee per chick he treats to cover the medicine and start him in a new trade. When the four hens have produced a considerable flock, the new flock owner gives away four hens to others who include the para-veterinarian. A third position is created for a marketer who will go to Agona to negotiate a price for the chickens that will stay the same for at least three months. That marketer will take the chickens from the producer and sell them to the Agona shop or dealer, returning the money to the producers with a piecemeal price for his services. The system is currently being tried in Assam and I will find out how it is working and help the Anab to complete the booklet for use in Ghana and elsewhere.

Additional Livelihoods

Additional livelihood training was suggested by villagers that I did not have time to research. These included creating fish ponds, local giant snail production, honey production, soap making, and crafts. Some of these had been taught in past programs.

Restaurant in Nboekrom

At the meeting at Nthakrom, a woman suggested help in creating a restaurant. Since between Nthakrom and Boekrom there is a considerable population of over 2000 people, organizing a women's group to begin a restaurant may be a feasible business to start.

Appendix 1

Action Plan for Creating a Forest Protection Force around Cape 3 Points Forest Reserve

Preface - Based on the grouping of communities, suggestions from the Agona community meeting, the shape of the Cape 3 Points Forest Reserve (C3PFR) and a compromise budget, I have written a suggested start for creating the Forest Protection Plan. It should be implemented with the consent of the CREMA, Forest Department and Wildlife Division.

The first step is for the CREMA to begin the process of strengthening itself. CRC can start the process by encouraging regular meetings. The reason for the meetings would be that CRC is interested to create a Forest Protection Plan and can use this tentative plan for discussion. Having this as their first project could help to strengthen the CREMA. The first order of business of these meetings would be to determine which villages are in the CREMA and which villages do not have CBAGs (community biodiversity advisory groups).

There are some initial steps that can be taken:

Seven (7) bamboo, thatch and mud structures can be constructed by the CREMA and CBAGs to create camps for the Forest Protection Forces. These will be simple places where members could hang out close to the forest when they are patrolling. It will be a place where they can also cook a midday meal and coffee etc. Placement of the camps should be determined by the historical village boundaries and also based on which villages will work together. See the map for a possible suggestion.

If the CREMA likes the idea of planting abet and raffia palms on the border of the FR that they will own and create some income from, they can begin this process village by village when the best time for planting would occur.

Signs should be made saying that C3PFR is protected by This (name) CREMA. They should initially be placed at the boundary on trees or stakes and eventually be moved to the palms once they are large enough.

The spacing of the camps should be based on the convenience of the villages using them and a regular spacing around the FR. If there might be future camps added, then those should be thought about before locating the original 7 camps.

There would be one 365 day salary for each camp at C5 per day (C1825/year) and another C5/day for food for communal lunches, etc for others in the CBAGs. How the CREMA decides who will be on these Forest Protection Forces (FPF) would be their decision but since they seemed comfortable with CBAGs I am assuming they will use them as the FPFs.

Once the FPFs are selected they should be trained by the Wildlife Division staff. They should be

issued laminated photo IDs that they would wear when patrolling. They should have some basic uniform item like a shirt that can be used communally by whoever is on patrol. There should also be other items like rubber boots, binoculars and GPS units for each Forest Protection Force camp.

Then the CREMA would select those who would be in the FPFs based on interests and knowledge or whatever they choose. A set of schedules for each camp would be laid out by those in the FPF. Each camp selects one or two men or women as organizers of the camp and patrolling schedules. As a group, based on historic boundaries, they should plan a route based on existing trails that they would use to patrol the areas each day. The salary would be rotated according to what the camp decides but there will always be food available for others in the camp. Eventually the adjacent camps would coordinate their schedules for better coverage of adjacent areas. If any group had problems with encroachers it would help to be able to call on adjacent groups so that such problem encroachers could be approached by groups of at least 8-10 people.

All CREMA staff and CBAG volunteers should be given laminated photo ID cards to wear when on patrol and where possible all staff and volunteers should have a minimal uniform such as a T-shirt. A long term goal would be for these guards to have a full uniform and kit which costs approximately C50. These staff and volunteers should get training from the Wildlife Division (the man recently assigned to the C3P region can train them) before beginning patrolling.

Daily patrols of two or more men or women should be the protocol and they should be carried out every day in the area designated by the community and CREMA as the area that they are responsible for. Each daily patrol should record the following records: time of start and end of patrol, members of patrol, interactions with encroachers, confiscations, warnings, etc. They should also record occurrence of primates and other species with troop sizes and numbers of males, females and young if possible, and where located once we have a map of the patrol area or by use of GPS units.

Budget

7 full year salaries @C5/day (C1825/year)	C12,775.	\$8517.
7 daily camp food rations @C5/day (C1825/year)	C12,775.	\$8517.
21 camp kits (shirts, boots, etc) @C50	C1050	\$700
Materials for camps	C2250	\$1500
GPS Units 14@ C225	C3150	\$2100
Binoculars 14@ C30.	C420	\$280
Total	C32420	\$21,614.

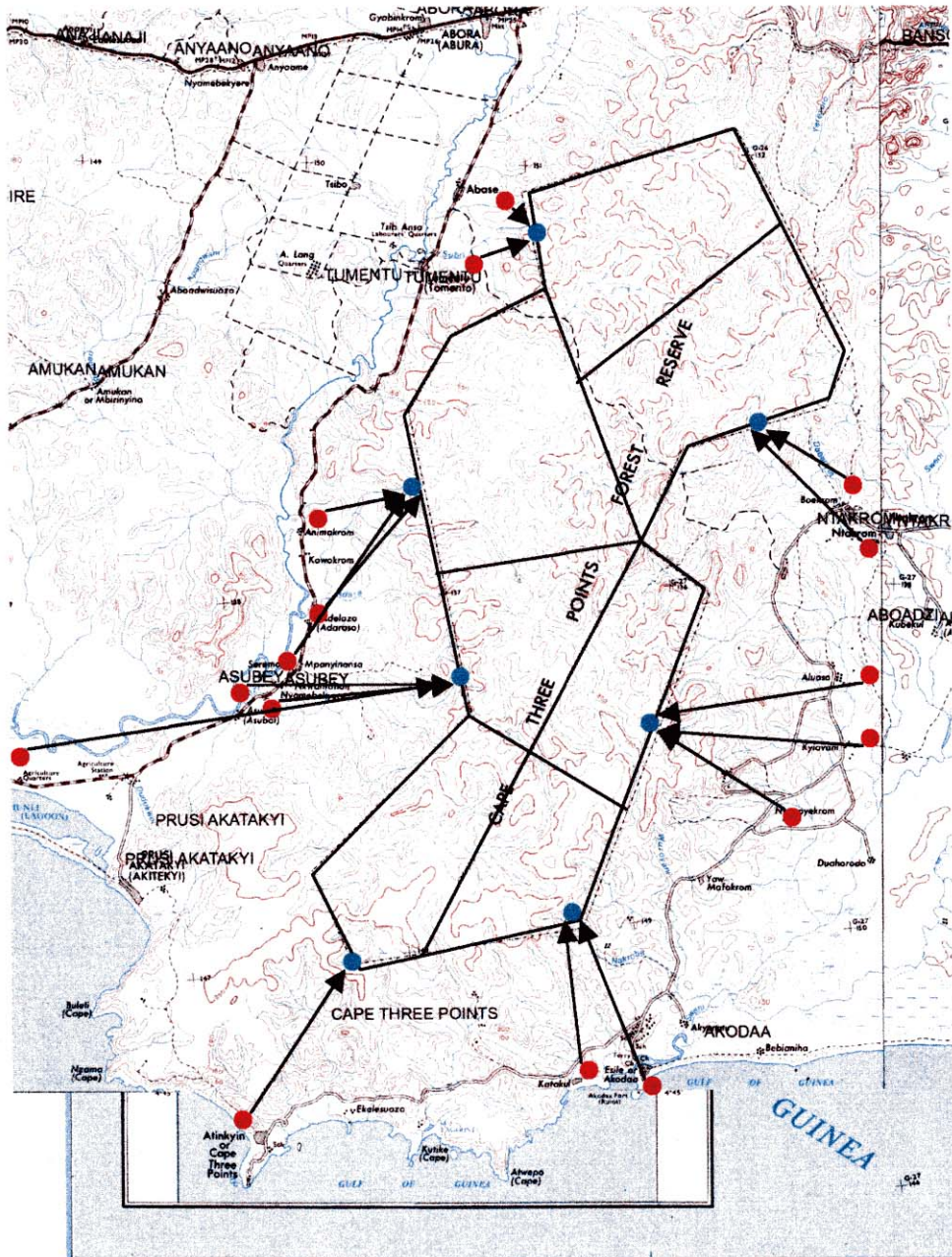


Figure 1 Map of the Cape 3 Points Forest Reserve. Red dots = villages, Blue dots = patrol camps, arrows indicate which towns use which Forest Protection Force camps.

Appendix 2

Challenges and Opportunities for Community Co-management of Cape 3 Points Forest Reserve

Forest Reserve Fringe Villages

With the help of Acquah Roland and Daniel Arthur I had meetings with people from the western fringe villages of Cape 3 Points Reserve Forest including Asuboi, Nkwatandan, Serenowu, Adalazo, Animakron, Tumentu and Abease. With Bernard Suanda Cudjoe I had meetings with people from the eastern fringe villages including Ketakor, Akwidai, Konanfrom, Kyiavani, Nfakrom and Boekrom and we sent a messenger to Aluaso. The meeting participants ranged from 16 to 36. The meetings were an attempt to show the villagers examples of community conservation projects with a discussion of the Ghana situation at Cape 3 Points. All meetings were received well and I was able to get an idea of the interests of the villagers and a rough idea of what the communities were capable of doing.

Challenges

The main challenge to the Cape 3 Points area is the rapid loss of the forests and wildlife that are rapidly being replaced by monoculture stands primarily of rubber trees and some palms for oil, leaving the Cape 3 Points Forest Reserve as a remnant of the area's biodiversity. However, despite the forest transitions there is still potential to create forest corridors that would link Cape 3 Points Forest Reserve to northwestern forests toward Ankasa and the border with Ivory Coast. While forest loss is a challenge to conservationists, many community members asked why they should protect a forest that they have no knowledge what they get from it. Additionally they have no feeling of ownership of the forest, feeling that it belongs to the government. Others who get things from the forest know its value but worry that those needed things will be unavailable to them when forest is completely gone and the Forest Reserve is closed to them. So at best they need livelihood replacements that will help them to develop economically. Despite the mixed responses to the forest, villagers as a whole felt they would like an opportunity to protect the forest and felt that they could do it. But they felt that in the past when they tried to help they received nothing for their efforts from the government. They stated they would like some of the forest protection jobs to go to local community members.

Thus the village meetings were favorable toward creating Forest Protection Forces from within the fringe communities around Cape 3 Points Forest Reserve, as has been done in India and Costa Rica.

Opportunities

Potential for Community Co-management

Although there is a great deal of information on co-management and community co-management, and there are many countries experimenting with it, there is still a lot to learn about community co-management in practice. A system of community co-management is needed to replace old community systems that have been lost but in many cases were effective in helping communities to manage their lands and natural resources.

Although there are many policies in place in many countries for community co-management and there have been many experiments for many years, I am not convinced there are any systems of community co-management in place that can yet be used as models. Belize has communities co-managing National Protected Areas but in name only. Communal conservancies are protecting and exploiting wildlife that has provided an environment for increasing populations of wildlife. In India, the communities are protecting the Manas Biosphere but the government has not yet embraced a formalization of community co-management. Ghana has created the CREMA law and there are a number of CREMAs that have been initiated, some by the communities themselves but they are still in the experimental stage.

So the stage has been set in the Cape 3 Points Forest Reserve Area and a CREMA has been initiated in 2008. This is a first step. CRC's initiating my visits to the fringe villages and the community meeting held in Agona on April 4, 2011, was the next step to getting CREMAs functioning and learning how they have functioned or not functioned. Similarly the meeting gave us insight as to how CBAGs function or not. We are thus in the very early stages and should proceed slowly to set a strong base. Community co-management should be a system by which communities who make up the CREMA work together with government agencies like the Wildlife and Forestry Departments and NGOs to create a system of management for the Cape 3 Points Forest Reserve and its buffer zones. The meeting showed how CREMAs and CBAGs gave at least an initial push to involving the communities in thinking about conservation of the area. There was confusion on how the CREMAs get power and the relationship of CBAGs to CREMAs. It was cleared up by Felix of the Wildlife Division who has been attached to the area to help the CRC project. He noted that the law for CREMAs was from the Ministry of Lands which gives the CREMA the power and they just need to develop the power they have. Later in the meeting people felt that the CBAGs should be a part of the CREMA.

To develop the Cape 3 Points CREMA, I would advise taking a two pronged approach: 1) build the CREMA to include all of the interested communities in the CREMA and 2) initiate a conservation protection action involving existing and potential CBAGs and other interested parties as the first conservation act of the CREMA. However it should be noted that forest protection is only one aspect of land management that the CREMA would be involved in. Since

forest protection is so important to prevent the current threats to the forest and biodiversity, I suggest it be the CREMA's first action to be carried out with the help of government and CRC and other interested parties. At the community meeting I addressed the villagers telling them that if we could get funds for forest protection it might only be for 2-3 years and I asked if they could accept that limitation. They seemed to be OK with that so it set the stage for CRC to help them to create a Forest Protection Force at any level they wanted to begin at.

CREMA Forest Protection Forces - Forest protection should not be considered a sustainable occupation. There are no saleable products but rather it is a direct cost of governmental conservation and eventually the expenses must be picked up by the government or other donors. The long term goal is to help the CREMA to develop a strong organization to work with the Forest Department to protect the Cape 3 Points Forest Reserve.

Initially we would work with the various communities to develop forest protection forces to patrol specific areas of the Forest Reserve. These areas may already be somewhat dictated by the historical stool land boundaries of each village under the village Chiefs. The idea would be to have 2 persons minimum, patrol the town's stipulated area every day. If enough people volunteered, each volunteer's work may only be one-two days per month. If there was a chronic problem of resistance by specific encroachers, then the town or towns would confront the encroachers in a larger force either from the village or in conjunction with neighboring CBAGs or adjacent Forest Protection Forces to get the message across and to assert the CREMA's strength and ownership.

Eventually the CREMA steering committee would develop a plan as to what jobs need funding to maintain a strong CREMA Forest Protection Force. This might mean funding a number of permanent CREMA forest guard positions and a schedule of CREMA meetings perhaps once every two months to discuss the effectiveness of the system and how to improve it. However, initially based on discussions with local men, I propose a set of 8 to 12 simple camps be built around the Forest Reserve periphery. These would be only simple structures built by the community participants of local forest materials. This may be a good first step since it was mentioned in the April 21 meeting as of interest to the communities so they would have a base closer to the forest. Their function would be as a temporary daytime retreat for the community Forest Guards to relax and to cook midday meals. These camps would be situated at somewhat similar distances from each other essentially surrounding the Forest Reserve. Eventually all Forest Protection Forces would become familiar with the location of the other camps, especially those adjacent to each other including adjacent sites between eastern and western park boundaries.

Since finances in the long run would be hard to find I would suggest the following budget: one 365 day salary at C5/day for each camp. That would amount to C1825 GH per camp or C21,900 GH for 12 camps. A midday meal for an average of 3 people @ C5/day would add an extra C 1825 GH per camp or C21,900 GH. This would double the cost but would increase the esprit de

corps and create an inviting social atmosphere for the camps. The total budget for 12 such camps would be C 43,800 or \$29,200US or \$24,333 for 10 camps or \$19,133 for 8 camps. The number of camps would depend on the number of village units and what was considered an affordable budget.

Appendix 3

Methods and Data Needs for Ecological and Social Surveys for Cape 3 Points Forest Reserve Area

Ecological Surveys – The main data collection at this time is to gather all existing reports, research papers and other studies to compile a species list of all of the major flora and fauna groups in the Cape 3 Points Forest Reserve to include plants (trees, lianas, shrubs), mammals, birds, reptiles, amphibians and invertebrates such as butterflies.

The first priority would be to get baseline censuses of the diurnal primates as noted in the protocol for primate monitoring in Cape 3 Points Forest Reserve. The second priority would be to create a protocol for a yearly census of selected breeding birds. There are protocols in the literature, at least for North American birds, and most bird researchers would know of them. Local Ghanaian bird experts would have a good estimate of what four week period when breeding male bird species will be calling. Then if bird experts carry the censuses out they could select all the species whose calls they easily recognize. Then they could lay out a survey trail and follow the protocols they know for the number of days they would survey and the number of species they could handle. They could then estimate a density for each of the species they counted. These experts could duplicate the census every year during the same four weeks as long as they were interested. Additionally, during the first season, they could train a number of community field participants on specific species calls. These trained field workers could then census selected species based on their knowledge and confidence. Eventually these field participants could continue the censuses each year for the specific species they know.

Sociological Surveys – The types of questions that might be of interest that could be used in the sociology surveys that you anticipate carrying out in the fringe villages of Cape 3 Points Forest Reserve might include the following questions:

1. How many plants, mammals, birds can you recognize and name. 1-10, 10-20, 20-30, 30-50, over 50
2. How many years have you lived in the Cape 3 Points fringe villages. Category of years.
3. What non-timber plant products do you use from near or in the Cape 3 Points Forest Reserve. Name of plant tree, vine, shrub, herb. What plant part do you use? leaf, seed, bark, other part. How do you use it, how do you prepare it?
4. Do you or have you hunted what animal? What parts do you eat? What parts do you use and for what purpose do you use it?
5. Do you collect fire wood from the forest? What species do you prefer? Most, next, next, etc. Have you used dead trees. Have you cut live trees?
6. How far do you travel for firewood?

7. Have you planted any tree species? How many have you planted of each species. At what age will you harvest them? What will you use them for? Firewood, building, fruit, other uses.
8. Have you cut other trees? For what uses?
9. Other sociological questions to compare with the above questions: gender, age, religion, tribe or culture (give relevant choices).

II. Primate Forests of Western Ghana (2012)

While working with CRC during 2011, I was able to introduce staff from West African Primate Conservation Action (WAPCA) into the Cape 3 Points Project. Together with the encouragement of Mark Fenn of CRC, we wrote a grant to the Margot Marsh Biodiversity Foundation for work on the forests adjacent to the Tanoé River which was accepted for funding. Additionally, CRC was able to get money committed for Cape 3 Points forest protection. Thus, the primate protection projects have extended into the future with Jeanne Marie Pittman and David Osei of WAPCA.

Having made my first visit to Ghana, about a year ago, in 2011, I was able to renew my contacts and make new ones in the Coastal Resources Center, WAPCA and the Ghana Wildlife Division and in the Ghana political realm on a trip in February-March 2012. These included introductions with the Executive Director of the Wildlife Division, Nana Kofi Ada Nsiah in Accra, The Park Manager of Ankasa, Cletus Balangtan, The Wildlife Officer in charge of protection and security at Ankasa, Bona Kyiire and Jennifer, the officer in charge of CREMA development, I also renewed contacts with the Cape 3 Points Working Group including Moses Sam and Felix Nan of the Wildlife Division, Emmanuel Nitiri of CRC, Mina. Joss-Marie and others of the Conservation Foundation. My visit was planned to overlap the change over of staff of WAPCA between the present Director, Kathy Silenga and her in-coming replacement Jeanne-Marie Pittman.

Cape 3 Points Reserve Forest

I attended C3P working group meeting on March 7, 2012 with members of WAPCA. While there was some interesting discussion about what to do, and the CREMA President Roland Acquah was in attendance, I felt there was too much of a top-down approach. I would rather see the C3P working group focus on how to help strengthen and help the CREMA empower itself. The crucial factor for creating a successful community conservation project is to get an active and empowered community group or CREMA functioning as managers. One avenue is to begin them making any decisions, even small ones that can result in some actions. In a later discussion with Emma, he talked about needed reforestation of coastal mangroves. Bringing that idea to the CREMA and asking them to recruit volunteers to create mangrove nurseries and plantations would be a good place to start because it immediately would involve the community in direct conservation action – reforestation. That might be a good win-win situation for the Princesstown and Eastern sub-CREMA groups to begin with because it could involve both those interested in the forest as well as the fishing community because it is understood that the mangroves act as nurseries for fish and other aquatic life.

Recommendations for Cape 3 Points

From discussions at the Agona meeting this trip and other villager discussion from my earlier trip, I feel there are four main priorities: 1) strengthening the CREMA by getting them

functioning on making decisions that will activate community action and will have benefits for the communities, 2) begin training for community livelihoods, 3) begin training for forest protection and natural resource management, 4) initiate a system of community forest protection for Cape 3 Points Reserve Forest.

1. Strengthening the CREMA

Sometimes, we as trained professionals, feel we can contribute a great deal by teaching others with less training. However, adults in the communities often learn better in environments engendering them to learn by doing. Although many villagers may not have the formal training that we have, as adults, they have been managing their own lives and have many skills that they have developed from their own experiences. For example, rural people who have lived in and near forests may have a good knowledge of the forest and wildlife even though they may not know the scientific names of the plants and animals. So it is important that we encourage them to use their skills and knowledge to manage the natural resources of their area; but it is just as important to help to train them in things that they do not know and that they request to know. This is the way that we can help them to create an empowered CREMA.

Because of geographic locations within the area encompassed by the CREMA it may be important to encourage sub-CREMA groups to meet to work on common problems based on the local access to each other. Initially, this may be on a trial basis on what may work but may develop based on local networks. The sub-CREMA groupings that seem to emerge in the Cape 3 Points working group was 1) western Princesstown wetlands and coastal area, 2) eastern wetlands and coastal area, 3) Cape 3 Points Reserve Forest area. The Cape 3 Points Reserve Forest group may present some geographical problems but using forest paths may facilitate meetings once the forest monitoring program is initiated. Additionally, there may be more interactions once the CREMA establishes working committees on specific ecosystems such as fisheries, beaches and mangroves, wetlands, and inland forests.

The most important aspect is to encourage the CREMA to meet on a continual basis and keep records of their meetings. Encourage them to begin making decisions and generating actions on some obvious problems and situations such as mangrove reforestation, inland reforestation and creating a forest protection system. There are probably many others that I am unaware of that local villagers will know about but I will give examples of these three ideas.

Mangrove Reforestation

The CREMA can decide where are the important areas to begin the reforestation. They may need some help in developing nurseries but there are probably many farmers in the area who will have skills to develop the nurseries if trained. (I noticed from a book on reforesting mangroves in Senegal from Mark's office that it may be possible to gather existing young mangrove seedlings from mangrove forests and replant them in the new areas). The CREMA will have to do the hiring of nursery developers if there is money available for payment for these positions.

Mangrove plantings should be carried out by volunteers from the CREMA during the proper rainy seasons when success of the seedlings will be maximized. Plantings can be good community social events by creating an atmosphere of sociality in such work-days. It might be a good idea to encourage local participants as para-ecologists to monitor and keep records on the methods used to determine success rates in the plantations. Hopefully, CRC staff may be able to coordinate this research.

Inland Reforestation

The CREMA should make decisions on where best to do reforestation for what reasons and goals. Currently, the Cape 3 Points Reserve Forest is isolated and surrounded by various types of clearings. Large-scale rubber plantation dominates in many areas. The CREMA through maps and on-site knowledge should begin to develop recommendations on what would be the most beneficial reforestation for the general good of the community. If their ideas involve private lands then they will have to negotiate and convince landowners why their ideas are important.

Creating a “working” forest buffer zone would be good for an extension of the forest and wildlife. Creating forested corridors would allow for expansion of wildlife populations and genetic flow into other forested areas. The CREMA could decide where would be the best buffer zone forests and what species to plant for what purposes. Some may be for fuelwood, for lumber or house construction, for medicinal uses, food or wildlife/primate use. Would it be possible to have these buffer zone corridors to extend through areas of rubber plantations?

Cape 3 Point Forest Protection Monitoring System

At the CREMA meeting in Agona on March 13, 2012, I announced that CRC had some funding to pay community members to patrol the forest. There are many decisions for the CREMA to make in this regard. All interested members of the CREMA communities should let the CREMA know of their interest in patrolling. The CREMA should decide if the numbers from each community should be limited or should all interested parties be included in the paid rotation. If so how many members should make up a team that could patrol and share the meal budget (presumably, only one member of each team would be paid each day but a selected number could share meals depending on how much is budgeted for the camp meals).

The CREMA should decide where to set up the camps. My proposal proposed 7 camps depending on the budget. The CREMA should direct or coordinate the building of the camps. An open air shelter for resting and eating a noon meal would be built at some what equidistance apart to surround the Reserve Forest. The CREMA should decide the areas to be patrolled by each camp and should direct the GPS mapping of these areas. There may be marker stones available to aid in the mapping otherwise use existing trails in the mapping. The prospective patrollers would build the camps and map the area.

If the CREMA liked the idea of planting specific utilitarian species to demarcate the Reserve

Forest, they should organize the propagation of those species within the mangrove nurseries and might decide to create additional nurseries for inland forest species and reforestation. I suggested using native abet and raffia palms and alternating them to create a border that would demarcate the Reserve Forest and could be used to produce finances for the CREMA. Once the border trees had grown sufficiently they could be marked on their trunks with a white stripe and have signs that state “Protected by the Cape Three Points CREMA” placed on them eventually. The CREMA should make these decisions and coordinate the carrying out of their decisions.

Once the forest patrol candidates are selected, the camps are built and the patrol areas are mapped, then the CREMA should begin to coordinate the patrolling of the forest with the help of the Conservation Foundation staff. They should arrange for training by the Wildlife Division and the Forests Service with verbal and written job descriptions about how they should function and what powers they would have. Arrangements should also be made that the members selected for patrolling and other CREMA members interacting with the forest patrols should have laminated identification cards from the government authorizing them as forest protectors. How the patrols are regulated and coordinated should be decided by the CREMA. I will send the Conservation Foundation some sheets as samples of the type of information that patrols can take. Information the patrollers should record might include: 1) members on the patrol, 2) which member was the paid member, 3) time of patrol initiation and end, 4) path taken if there is more than one path, 5) interaction with encroachers where, when, with who and how it was resolved, 6) evidence of illegal activities and where they occurred. 7) wildlife sightings, 8) monkey groups sighted with censuses and where located (mark the area with colored ribbon for later GPS location). Additional payment sheets could be devised by the CREMA to direct the Conservation Foundation staff on how to pay the patrollers in a transparent method.

Livelihood Training

There was some mention of livelihood training in chicken and grasscutter farming with the loss of chickens in transit and the escape of grasscutters. I want to emphasize that most of the potential micro-industries that the villagers may have interest in have been well studied and developed. In addition to any academic experts recruited for the training I would search the villages and nearby community for local people that have been successfully carrying out such micro-industries. For example, I observed a man in the village of Abease who was successfully raising grasscutters. According to Roland Acquah he is still raising them and has many more now. He told me that his basic set up could be constructed for 100 Cedis. It was an enclosure of about 6’ by 10’ constructed of mud 4’ tall with a bamboo construction another 2’ high. It had a door made of some material that grasscutters could not gnaw through. There were separate cages on shelves where females with young could be isolated from males who might kill the young. They should be isolated for two months. At the ground level, there were many grasscutters. Since they are a very flighty prey species, I would give them some cardboard or wood tunnels to hide in. This is based on my limited knowledge of rodent behavior.

However, I would again emphasize that most of the micro-industries of chicken, grasscutter, snail and fish farming and honey production are well documented and both academic and local experts are probably available in Ghana so there is no reason to have to reinvent methods and to unnecessarily lose animals. There are methods to transport chickens in the heat that should work and cages for grasscutters that they cannot escape from. Look to local experts for duplicating their successes. There is a poultry farm that I passed in Agona that perhaps could be of help. I have passed local fishponds. I have visited the Frenchman's farm in Ankasa. He is rearing talapia and catfish and is rearing rabbits. I am sure there are local experts for honey and other micro-industries to draw upon so that unsuccessful initiation that happened with the chickens and grasscutters will not be repeated.

Natural Resource Training

Roland Acquah, President of the Cape 3 Point CREMA requested training on natural resource management that was encouraging. Presumably CRC has experts that could do some training sessions. However, for longer term results it would be important to have some on-site long-term training. One idea would be to specifically request a Peace Corps Volunteer with a natural resource management background. In my experience in other countries, I have met such volunteers who were in their thirties with MS degrees and some retired natural resource managers who have joined the Peace Corps. I have also encountered similar experts in agriculture who were interested in working at the village level who might be requested to help in the micro-industries discussed above.

Micro-financing and Self Help Groups

Another obstacle both expressed by villagers and project workers was the difficulty for small entrepreneurs in obtaining even small finances to start small businesses. Self Help Groups and micro-financing that started with Yunus in Bangladesh has spread and has been successful in many countries. Although my experience with it has been limited I believe where it has failed is when middle-men have been involved. Where it has been used in India in a project I am involved in, it has been quite successful because of the interest, trust and thoroughness of the community organizers. In general it has been more successful with women's groups. The Self Help Groups (SHGs) can be started and encouraged without much startup money. Although their results are primarily economic the successful ones serve an important social function that helps develop empowerment in the villagers especially women.

SHGs can be started by same gender groups of 10 to 20 men or women. The group decides how much money they each will deposit in a common fund each month at their meetings. Often it is relatively small such as one Cedi per month. With 10 participants that would amount to 1200 Cedis in one year that could be used for small loans to the group members for start up funds at modest interest rates. So, for example, a member wanting to start a grasscutter micro-industry, could be loaned 100-200 Cedis for the cage and start up stock that might be repaid after 3 months

or so from the first sales of bred grasscutters.

Some reasons for success are that when trust is developed between members, if a member does not contribute or does not repay a loan he or she faces social sanctions from friends and community members. Additionally, once it lasts for a year or more, the more money put in by a member, the more they have to lose by dropping out or risking expulsion by failing to pay or repay a loan. Some groups work without association with rural banks while others use the bank association. When groups show strong bank accounts they can get additional bank loans. When they repay the bank loans consistently they may get larger loans and can expand their businesses accordingly.

My objective for the Cape Three Points Area in my September 2012 trip was to pursue my main recommendations from my March visit – to stimulate the creation of a CREMA organized system of patrol teams and forest camps for protection of the Cape Three Points Reserve Forest.

I had discussions with Roland Acquah, the CREMA President, giving him an assortment of CREMA oriented documents including my reports so he would be more informed and encouraged him and the CREMA Executive Committee to take the authority that the government gave him and the CEC through the Certificate of Devolvement that Roland showed me he had. We checked with Roland again in Agona before we went to Ankasa to make sure that he was moving ahead with the meeting and had no difficulties. I also had discussions with Emma in regard to our goals for the CREMA meeting.

From our meeting with the Executive Committee of Abase (3 of the 7 members) we became aware of their concern with the gold mining operations. We explained that if they participate in the CREMA activities to establish patrolling in the Reserve Forest the CREMA has the power to stop all illegal operations with support of the Wildlife Department and Forestry Services. They requested that they will need photo IDs for these patrols and we noted that we will work on getting that for them. We encouraged them to take the authority the CREMA affords them once the protection system is set up.

We stopped to take videos and photos of the gold mining operation at Tumentu before returning to Agona. We met Roland there and he asked to be taken to the Tumentu mining site. We took him there and he first talked to the miners, and then visited the Chief of Tumentu who acknowledged he knew of the operation but blamed the government for allowing the equipment into the country. Then we went to see the Chief of Seremow and hearing the nearby gold mining operations, we visited the site on a nearby river. We talked to the operation leader and explained the problem and mercury pollution. We then went to see an open pit that had been dug next to a rubber plantation in Abase. In all, there was mining at Abase, Adelazo, Tumentu, Seremow and Animakrom. We returned with Roland and went to the Assembly Offices to report the illegal gold mining operations we had seen. We went first to see Haruna, the Deputy District Coordinating Director, who is on the Cape Three Points working committee. He took us to the

next man up and then to the Ahanta West District Chief Executive, Hon. Joseph Dofoyenah. We showed them the videos and the DC's response was that it may not be so easy to stop it. We felt that this weak response may be due to the election period and working with the Assembly may need to wait until after the elections in 2-3 months. In discussion with Emma, one plan may be to try and encourage CREMA members to report and register complaints about the mining with their Assembly representatives.

Roland and Nukruma worked on the agenda for a 2-day CREMA meeting on Sept 14-15. Emma asked for a budget and Roland wanted to include the Chiefs which would total about 50 people for 2 days. I suggested that he review ways to decrease the budget in case CRC would require it. Roland decided that a one-day meeting would be sufficient to reduce the budget required.

The meeting was held at the Rajgil Guest House in the open-air room. It began with participant introductions at 10AM. When Roland returned he introduced the meeting, Emma and I spoke and there was a great deal of discussion. The general impression from the meeting was that it was a good first start and that there would be actions to appoint Community Monitoring Teams of 4 patrollers from each village and they would begin the process of setting up a forest protection system with these teams of community monitors. Although the meeting generally liked the system of creating Reserve Forest demarcating using special trees, they chose to use local mahogany trees as the demarcating species.

I had suggested to Mark that perhaps the CREMA should request a PCV specifically to work with and act as a staff to carry out some of the needed coordination of actions for the CREMA. In discussion with Jake McCommins, the existing PCV stationed at Cape Three Points, he expressed an interest in helping the CREMA in their goals and objectives. He spoke with Roland about his interest and Roland stated an interest in Jake's participation. This will be an opportunity for the CREMA to try out this idea and if it works out they can request a replacement when Jake leaves Ghana.

Recommendations

I was encouraged by the results of the CREMA meeting and I think it would be good for those involved such as Emma, David and Jake, to follow up with Roland and other members of the CEC to see if they need any help in what they are doing. Once the Community Monitoring Teams (CMTs) are selected, Felix should be contacted to set up training for them on protocols that they should follow when confronting illegal activities and encroachers. If he is not available, David and some of the WD staff from Ankasa may be able to carry out the training. The CREMA CEC with the help of the CMTs should decide how many and where the camps should be set up. The idea of setting up camps has multiple functions to 1) mark the forest with them, 2) create a base from which the CMTs can work from, and 3) provide a social place where other members of the CMTs can rest when not on patrols, seek shelter from rains, and provide a site for cooking lunch and coffee. It would be good to encourage a number of CMTs that are in close

proximity to each other to build nearby camps together, building first one camp and then the next and so forth. This will help engender camaraderie of adjacent CMTs and get them working together. They, with the CEC, Wildlife and Forestry will need to decide the specific area, each CMT will patrol so that the entire C3P forest will be monitored and protected. WD and WAPCA and others can create a form for patrols to fill in each day they are out on patrol. I will create a sample form that can be modified but other interested parties can do the same. Such things to be covered might include number on patrol, who was paid that day, who led the patrol, how many on patrol, illegal activities encountered, result of the encounter, any linking up with other CMTs, primates or other wildlife encountered and where, census (species, ages, genders) of the primate group encountered.

Once the patrols are going successfully, David and WD staff should train the CMTs in primate censusing and marking the forest where and when primates and other wildlife are encountered. Later they can record these sighting points with GPS units. Once the CMTs are proficient at censusing and the primates become more acclimated to humans and are not harassed by hunters, a baseline primate count can be made to compare to future censuses that will indicate how well the CMTs are protecting the forest.

Tullow should be contacted and encouraged to give the Conservation Foundation the first installment of the promised grant for the first year. If that is late in coming the CRC should front the money needed to build the camps. It is important to maintain the momentum generated by the CREMA meeting by follow-up actions.

Jake should work with the CREMA and CMTs to see how better communication can be set up and how committees can be set up to work on different areas including beach areas, eastern wetland areas, etc. He should work up a method where CREMA meetings can be carried out in more central areas of the C3P area so they are less costly and easier to do. For example, once the forest is secure, perhaps some pathways can be designated for easier connections between the east and west sections. There is already a pathway that can be used between Cape 3 Points and the Princesstown area. These paths in the forest can also facilitate interaction and communication of CMTs adjacent to each other and across the forest from each other. Sharing telephone numbers between CMTs will also facilitate forest protection. If it is ever important for more CMTs to come together to confront larger parties of encroachers, neighboring CMTs and those across the forest can come to the aid of each other. These confrontations need not be aggressive, since larger teams working together will merely indicate a stronger and better functioning CREMA protection team to the encroachers.

Finally, weatherproof signs should be made by the CREMA and posted around the border of the Reserve Forest. They should read something like the following - "This forest is protected by the Cape Three Points CREMA and the Ghana Wildlife Department. Logging, hunting, taking any forest products, gold mining and other activities cannot be carried out unless there is permission of the Cape Three Points CREMA. Such illegal activities may result in arrest, fines and/or

imprisonment, based upon the activity.”

In summary, the way I perceive the project to work or the “chain of command” is the following: the main authority and decision making would be done by the CREMA under Roland’s and the CEC’s leadership. The role of CRC, WAPCA, CC, Conservation Foundation, Wildlife and Forestry would be as advisors. However, initially it would be good for advisers to continually check on what is happening and re-catalyze activities when needed. The PCV would be a staff of the CREMA and would report directly to Roland and/or other members of the CREMA CEC. The Community Monitoring Teams (CMTs) would be considered as the activist arm of the CREMA and staff as well. When needed the CMTs would contact WD or Forestry as will have been decided earlier during the training. CEC members from the villages closest to each camp would ideally coordinate the CMTs based in the nearby camp.. Thus if WD or Forestry were not available when needed, the CMT could go to these CREMA members for help.

Currently in 2013, the Princesstown CREMA has selected villagers to carry out patrols to protect the Cape 3 Points Forest Reserve, Similarly, as part of the CRC program we met with Chiefs and communities along the Tanoé River. The local communities in these Kwabre Swamp-peat Forests are now patrolling and protecting their forests. As part of the CRC program we also made a trip to the Ivory Coast to view a similar project there to protect the Tanoé Forest in Ivory Coast.

Western Wetland Forests – Kwabre Swamp-peat Forest

During February 20–29, I traveled with David Osei of WAPCA to the villages situated along the eastern boundaries of the western wetland forests that border the Tanoé River, the border between Côte d’Ivoire and Ghana. These included Takinta, Allouley, Nzalenu, Nawule, Allana, Nuba, Mpataba, Mibiafini and Kwabre (There may be some discrepancy on which villages were visited and the spellings of their names). We traveled a great deal to contact the Chiefs and arrange meetings with them and the villagers. Most of the time, David and I, were accompanied by Victor Agyemang Duah of the Wildlife Division. David and Victor working together were very effective in maintaining customary protocol with the Chiefs and villagers. Between them they have developed a good social network in the area that facilitated the formal contacts and the meetings. David and I prepared a powerpoint to present at the meetings but the venues were too light so we made oral presentations instead. Similar to my presentations to the villages around the Cape 3 Points Reserve Forest, the previous year, I told stories about Belize, whose culture showed some similarities to Ghana since the inhabitants were descendents of slaves from West Africa and Assam, India, whose community protection methods could be used in Ghana. Then we discussed the situation of the wetland forests along the Tanoé River. Usually we collectively addressed the Chiefs and their council members and the community members and we informed them of the coming meeting and invited the Chiefs to the meeting on March 15 that would be held at the Jomoro District Assembly Hall in Half Assini. Usually a discussion followed with some questions. The general result was that the community felt that the idea was a good one but

they had reservations about our motives and were afraid that what we were planning might impact negatively on their control of their lands and the customary laws that they followed regarding the lands. We explained that these were not our motives but I am sure that given this was our first contact with them in regard to the project they probably understandably, still had reservations.

During March 8 –11 I accompanied Kathy Silenga and Jeanne-Marie Pittman of WAPCA and Victor Agyemang Duah to deliver letters of invitation to the Chiefs or their representatives. Often the Chiefs were unavailable to receive the letters directly so they were given to their representatives to be delivered.

Visit to Côte d'Ivoire

We arranged a trip to Côte d'Ivoire for March 1-4 with Dr. Inza Kone of WAPCA and Centre Suisse de Recherches Scientifiques en Côte d'Ivoire for David Osei and I. We were hosted by Drs. Inza Kone and André Djaha Koffi. The trip had to be shortened due to an illness and pressing business of Dr. Kone. We visited four participating villages including Kongodjan-Tanoé, Nouamou on the Ehy Lagoon and two villages on the Tanoé River across from Kwabre in Ghana.

When visiting the four villages we met with a group of the villagers and the Chief when available. We asked questions of the villagers we met about why they decided to protect the forests and how it was working. Their reasons for protection was that they saw that the forests were being cut which was borne out by the huge amount of palm oil plantations we encountered enroute to the town of Aboisso. They wanted to protect their heritage. With the help of the communities, the project was able to stop a large palm oil concession from going in the Ehy-Tanoé Forest. Generally the answers given by the villagers were very positive and concurred from village to village.

Early on, the villagers had one concern that was different from those of the project organizers. They felt that they should be paid to protect the forest. The result was that they were paid for the first two years but have been protecting their forest for the past four years without pay. The other ongoing concern is that the primates have been predated the cacao plantations that some villagers have growing on islands within the wetland.

Community-Based Forest Management Along the Border Between Ghana & Côte d'Ivoire (meeting on March 15, 2012 at the Jomoro District Assembly in Half Assini)

Due to participants coming from longer distances, including Côte d'Ivoire, the meeting got a late start at 10:30. The meeting was chaired by Awlae Annor Adjel. After an introduction of the 36 registered participants, I gave a joint power point presentation with David Osei. The presentation entitled "Community Conservation Stories" included stories from the Community Baboon Sanctuary in Belize that stimulated other community efforts, development of the Golden Langur

Conservation Project in Assam, India, how clans in Papua New Guinea created the first Conservation Area in the country and how communities were developing community conservation reserves in Peru to protect their cloud forests. I introduced a potential plan for community protection of the Cape 3 Points Reserve Forest. Then David began a discussion of the endangered primates of western Ghana and discussed the results of the community surveys of the villages around the wetland forests and discussed what WAPCA has been doing in 2011 and its plans for 2012.

Dr. André Djaha Koffi gave a presentation about the biology of the Ehy-Tanoé forests in Côte d'Ivoire and the community conservation that has been going on since 2006 in 8 villages. His talk, in French, was translated to Twi by a villager from Côte d'Ivoire. There was some discussion. Then a talk by Kofi Agbogah of CRC on prospects for cross border collaboration, habitat corridors and carbon funding was given, followed by a question and answer period.

Following lunch, the participants were divided into four groups to discuss the positives and challenges to creating community sanctuaries in western Ghana. The meeting ended with some summations, including a final summation by the Awulae.

Recommendations For Creation of a Community Sanctuary in the Wetland Forests

The presence of what seems to be a very successful social program of community conservation in adjacent Côte d'Ivoire presents a very valuable model that might be a great help in motivating Ghana villagers to adopt a similar program on the Ghana side of the Tanoé River for the following reasons: 1) the culture is similar, 2) they have the same language base and can communicate directly, 3) they will hold other villager communications as more relevant than those of outsiders, 4) there is a constant exchange of people across the river border and many are friends and relatives. For these reasons it is important to take advantage of the positive situation by promoting as much social exchange across the river as possible.

1. It would be good for David Osei and Jeanne Marie Pittman of WAPCA to take some more time to evaluate the Côte d'Ivoire program by: a) informal discussions with Côte d'Ivoire villagers, b) see if primate groups are coming to the villages and are acclimated to humans as noted by the villager exchange, c) get more information from the project organizers and the villagers and Chiefs about how the project and community group functions in coordinating the project and the forest protection
2. If budget allows, make a formal trip of Ghana village representatives to do a one-day tour of Côte d'Ivoire villages. Start early at the border and visit 3 or 4 villages making sure there is enough time for Ghana and Côte d'Ivoire villager exchange in each village. Have the Ghanaians take notes and hold public meetings in their respective villages to share what they learned across the border
3. Promote additional informal meetings between villages across the border from each other

4. Once a great deal of cross border exchange has occurred, have a meeting of representatives of all the Ghana villages to discuss their thoughts about the idea of community forest protection. If positive, then begin the process of helping them form a CREMA or other community group for forest protection and management.

Once there is a consensus that the communities are interested in the idea of community forest protection, then pursue some of the same venues of training for forest protection and management, livelihood training and perhaps venues of microfinance and self help groups that are being tried in Cape 3 Points or other successful CREMAs in Ghana.

My objective for the western wetland forest during my September 2012 trip was to monitor what David had been doing and advise him in any ideas that might help him.

In visiting the Chiefs and communities of Nawule, Allowuley, Takinta, Kwabre and Elena I was very pleased with the contacts David had made and the response of these Chiefs and community members to David's requests and to goals of the project.

Recommendations

David should continue his actions with the Chiefs and communities of these wetland forests. He should continue to encourage them to create community-based organizations or CREMAs and Community Monitoring Teams to protect the forests, especially in areas where the villages are close to the forests like Kwabre. In areas where the villages are much further away, he may look for alternative protection approaches. In one village, I believe may be Takinta he mentioned that he is working with one villager who goes to the forest with a motorcycle and monitors for illegal activities. They have confiscated a number of chain saws. This should be continued. In forests that are further from the villages, many of the villagers have their farms close to the forest. These farmers should be documented and perhaps David could call a meeting especially for them and request that they create CMTs that would document illegal activities when they go to their farms.

There is one problem in the Kwabre forest that needs to be dealt with right away. There is a false Chief contending to the lands including the Kwabre wetland forests, Frenchman's lands and part of the Ankasa forest. Most of what we found may just be rumors and we were not able to get direct facts on the situation. This contender has supposedly filed a Civil suit and then withdrew it. He seems to be trying to create confusion and threatening to remove people from their lands and requesting payments. Within this confusion, he is paying some small logging teams to log in some biologically significant areas of the Kwabre forests. The Paramount Chief should be contacted to solve the problem if possible.

Both the Nawule and Kwabre forests, David has said, are important for the primates. In a discussion with one of the Kwabre men that David has trained, the man made a statement that may be of significance. He described seeing a mixed group of primates in an area of the Kwabre forest about a year ago. He described seeing a larger monkey with the red and black pelage of the

Ms Waldron's red colobus that is thought to be extinct. I would recommend that David go with some of his Kwabre team and perhaps Victor of the WD or others with primate experience and a camera and cell phones (for sound).

Another request was made by the Nawule Chief who requested help with getting a drill used to create wells for the community. Such a drill costs about 1500Cedis. It is probably something that the government should do but it might be good strategy if CRC and WAPCA could help in facilitating the government to get the drill for Nawule.

A few of the Chiefs noted that they would like help in creating by-laws. I think they meant that they would like us to help them with a sustainable management plan for the forest. I and WAPCA staff, with help from CRC, need to begin writing a plan to be given to the Chiefs for review. It could suffice as a model from which other Chiefs could make their own modifications.

I have written a pre-proposal for this project with Jeanne Marie for the FEM grant, the French GEF grant. We will also be working on a second grant to Margot Marsh that will be submitted in March after we write a report to them on the first grant.

Trans-border Community Sanctuary

Since the contacts David has made and the response of the Chiefs and communities in the western wetland forests has been so positive, it is possible to begin thinking more seriously on creating a trans-border community sanctuary with Ivory Coast. Current thinking by WAPCA is to introduce the CREMA concept to the Chiefs and communities and encourage them to form a CREMA. This will then give greater legal strength to the project and the resulting community sanctuary. If they agree, then forming the CREMA will be a priority. Once that has happened and the CREMA is functioning well, we will officially bring up the idea of a trans-border community sanctuary to the CREMA to see their response. If positive, we will work with them and see what they would foresee and what would eventually evolve. Once there was an agreement by the CREMA we would try and arrange a joint meeting with the community-based network on the Ivory Coast side. The meeting would then consider what, when and how they wanted to proceed.

Addendum

An additional grant from the Margot Marsh Biodiversity Foundation to Community Conservation has allowed a continuance of the primate work at Cape 3 Points and the Kwabre Swamp-peat Forest. The Princesstown CREMA under Roland Acquah has begun patrols in the Cape 3 Points Reserve Forest with the Tullow money. WAPCA has been working with the Chiefs and communities in the Kwabre Swamp-peat Forest. They are forming a CREMA and have begun patrolling there as well. They have been continuing discussions with communities in Ivory Coast about creating a trans-boundary community protected area. Recently WAPCA has obtained a 2-year FFEM grant, ensuring an additional extension of the project.