



Ghana Wildlife Society's Position Paper on Bauxite Mining in Atewa Range Forest Reserve

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Trading Ghana's Atewa Forest: A Looming Crisis

The Ghana Wildlife Society is a non-governmental, non-political and non-profit making conservation organization. We have been at the forefront of nature conservation in Ghana for the past three decades. Our mission is to conserve wildlife in all its forms to ensure a better environment and for improved quality of life for all people. We belong to BirdLife International, the world's largest nature conservation partnership of 120 autonomous NGOs around the world. We operate based on the model that stipulates that, conservation actions must hinge on credible scientific evidence.

Our work over the past three decades has transformed corporate industrial practices and national policy, including the ban on trade in Grey Parrots and provision of models for community ecotourism initiatives in Ghana (Nzulezu and Afadjato). Our research work on Important Bird Areas (IBAs) presented the basis for government to designate 30 Globally Significant Biodiversity Areas (GSBAs) in Ghana (Atewa Range Forest Reserve is one such GSBAs). Our past campaigns have led to the stoppage of deliberate killing of bats in the Accra Metropolis. Through several research activities, we have contributed scientific data to various national policy processes. We rely on our junior wing, the Wildlife Clubs of Ghana to promote conservation education in schools and the general public.

Introduction

The Society recalls that in 2017, the Republic of Ghana signed a Memorandum of Understanding (MoU) with the People's Republic of China to develop our bauxite industry with Atewa forest as the source. The Ghana Wildlife Society (GWS) has followed the controversies surrounding the proposed mining of bauxite in Atewa Forest with keen interest. We unequivocally oppose any move by government to mine bauxite in the Atewa Range Forest Reserve, as the ecological integrity of the forest and its biodiversity will be seriously compromised and in the long term, deprive local communities of vital livelihood assets. We hold the view that this deal will only provide a false solution to the present economic problems of our country and create long-term ecological disaster especially for the people living close to the forest. This deal will further weaken the commitment of government towards protecting the environment.

We are not oblivious of the potential benefits of the proposed bauxite development and do not stand opposed to any action that mobilizes revenue to fuel government's vision of putting our country beyond aid, except when it has to do with one of the two known upland evergreen forests (including Tano-Offin Forest Reserve which is also under serious threat of bauxite mining). Knowing very well the significance of forests and particularly the remarkable and incomparable benefits and importance of Atewa Forest Reserve to Ghana as well as to the global community, we find it difficult to comprehend why government will trade such a natural

asset. We cannot afford to commodify this asset and present it as part of Ghana's commercial brokering chip to the Chinese.

Why must Ghanaians be concerned about Atewa Range Forest Reserve as a national asset?

Home for wildlife and biodiversity

Atewa Forest, located in the Eastern region of Ghana, was declared a forest reserve and gazetted as such in 1925¹. It is home to a large diversity of plants and animals, including 228 species of birds, 52 species of mammals and 32 species of amphibians. It is also home to certain endangered species of plants and animals known to occur only in Atewa and nowhere else in the world. For instance, the critically endangered Togo Slippery Frog found in Atewa cannot be found anywhere else in the world. The Togo slippery frog heavily depend on fast-flowing streams and that has made them very sensitive to habitat modification. One of the rarest and critically endangered butterfly species in Africa, the Atewa Dotted Border is endemic to the Atewa Range Forest Reserve. The Giant Ghana snail, which is the largest land snail in the world, can be found at Atewa, even though endangered². The forest harbours three species of Pangolin (known in Akan as "Aprawa"), another vulnerable mammalian species which is highly poached and traded as bush meat by hunters because of its perceived importance to traditional medicine and the pharmaceutical industry. The endangered White-naped Mangabay was recently discovered to be present in the forest reserve³. We can go on and on....

Global conservation significance

The Atewa Range Forest contains unique and rich biodiversity and it is recognized as a Globally Significant Biodiversity Area (GSBA). Birds are vital members of the Atewa Forest Reserve. As a result of this, the Atewa Range Forest Reserve is recognized as an Important Bird and Biodiversity Area (IBBA)⁴, meaning, it has international recognition as site for conservation of birds and other important biodiversity. The IBBA concept has been used as a practical tool for conservation worldwide. Birds are primary seed dispersers, and several tree species would not be able to reproduce without birds' help. Some birds are insectivores, keeping in check populations of plant-eating insects, and stopping their populations from explosion³. The survival of these birds is imperative to our agro-ecological system as a nation and by extension our food security and sovereignty. Some of the endangered bird species we have recorded in the Atewa Range Forest Reserve include the Nimba Flycatcher, Green-tailed Bristlebill, Yellow-bearded Greenbul, Brown-cheeked Hornbill and Copper-tailed Glossy Starling². Coupled with illegal mining activities in the Atewa Range Forest Reserve, the Ghana Wildlife Society has re-classified the Forest Reserve as an Important Bird and Biodiversity Area in danger. Mining bauxite will obviously confound the already existing crisis.

Contribution to science and knowledge

¹ Schep, S., Guzman, A., Van Beukering, P., Moel, H., Eiselin, M., Ayesu, S., Birinkorang, G., Ansah, K.B. (2016). *The Economics of the Atewa Forest Range, Ghana: Living Water from the Mountain Protecting Atewa Water Resources*. 207pp.

² Birdlife International.

³ <https://www.iucn.org/news/species/201712/endangered-primate-discovered-threatened-atewa-forest-ghana>

⁴ Conservation International (2013). *A Rapid Biological Assessment of the Atewa Range Forest Reserve, Eastern Ghana*. BioOne, 13-29.

In the realm of scientific research, the Atewa Range Forest Reserve hosts thousands of species of insects and other invertebrates, some still unknown to science. Recent scientific missions to Atewa discovered several new species of butterflies, dragonflies, and other small animals. Despite their small size, they provide special ecosystem services, such as pollination of plants, soil improvement, and play a critical role in the food chain for most vertebrates, such as frogs, birds, and several mammals to keep the Atewa forest ecosystem in balance. There are over 760 different species of vascular plants known from Atewa, including over 100 Upper Guinea endemic species. There are few places in the world where one can find this rich combination of plant species and biological communities. The national and global interests in pharmaceutical properties of tropical species makes the conservation of the unique biodiversity of places such as Atewa particularly pertinent⁴. The only tree fern species (*Cyathea manniana*) found at Atewa Range can only be located in two other places in the world.

Nothing matches the ecological value of Atewa Forest

Considering the economic benefit of bauxite mining vis-a-vis other options such as tourism, one may be tempted to argue for the economic justification of our proposition to conserve Atewa Forest. We must not be swayed by such arguments because, one cannot commodify or put a price tag on our forest. The value of the forest depends on what kind of use we want to put it to. The fact that bauxite may be high yielding (in terms of price) in the short-term does not mean it has high value. We must be interested in who the resource benefit is accruing to and which services the forest is providing. The forest must be considered on the premise of its value but not its price. The price of something does not necessarily define its usefulness, whether it is expensive or inexpensive. One thing with the same price tag could be less expensive for someone and very expensive for someone else. The government, businesses and conservationists place different values on our forest. No price or economic value will ever reflect the true value of Atewa Forest's biodiversity. Nevertheless, the Atewa Range has been recognized as nationally important for providing the headwaters of three river systems in Ghana: the Ayensu, Densu and Birim rivers. These three rivers are the most important sources of domestic and industrial water for local communities as well as for many of Ghana's major population centers, including Accra⁵. According to the Economics of the Atewa Forest Range, a study published by the International Union for Conservation of Nature (IUCN) and its partners, approximately \$3.1 million is generated annually from irrigated lands and floodplains at the basins in the Atewa range. Also, the valuation of water for consumption shows that the industrial sector and households might obtain combined benefits to the tune of approximately \$25 million per year⁶. We should bear in mind that the Atewa forest watershed feeds over 5 million people.

Our government and the entire country has committed to several international environmental related treaties

As the adage goes, charity begins at home. Our President has made very important statements to show his commitment to protect our environment. To cite a few, at the commemoration ceremony on the occasion of his appointment as co-chair of Advocacy Group of Eminent Persons for SDGs, our President said, "This Agenda is an investment in our future – the future

⁵ Conservation International (2013). *A Rapid Biological Assessment of the Atewa Range Forest Reserve, Eastern Ghana*. BioOne, 13-29.

⁶ Schep, S., Guzman, A., Van Beukering, P., Moel, H., Eiselin, M., Ayesu, S., Birinkorang, G., Ansah, K.B. (2016). *The Economics of the Atewa Forest Range, Ghana: Living Water from the Mountain Protecting Atewa Water Resources*. 207pp.

of our youth and that of our children. We are obliged to leave them with an enduring legacy of a richer, more stable, more secure and more peaceful world". It is obvious and we don't need any expert to tell us that destroying our Atewa forest for bauxite is not the trajectory that will insure the enduring legacy of economic stability, security and peace for our children's children. Again, as stated on page 90 of the ruling party's 2016 manifesto to support the conservation of biodiversity, the ruling government committed to "support the protection of the remaining network of natural forest and biodiversity hotspot in the country, to serve as gene banks for indigenous species and refuge areas for threatened, endemic and rare species"⁷. This was reiterated during the president's recent State of the Nation Address delivered in parliament on Thursday February 8, 2018. He said, "we cannot look on, as our very existence as a country is put in jeopardy and our water bodies, forests and land mass are destroyed." Ghanaians must hold the President and our government accountable for all these commitments. Ghana is signatory to several international treaties to protect our forests and the environment broadly, including the Convention on Biological Diversity, Paris Agreement on Climate Change, Convention on Migratory Species, and several others that have not been mentioned.

Problems we are likely to face with bauxite mining in Atewa Range Forest Reserve

Forest and biodiversity loss

There are several lessons from other countries that Ghana could learn from. Common examples are those of Awaso in Ghana, Guinea, Vietnam and Hungary. Since the Bosai Group from China took over the Ghana Bauxite Company Ltd at Awaso, what has significantly changed in the local economy of our brothers and sisters at Sefwi Awaso? Bauxite refining in Hungary caused serious damages through contamination of soils and extermination of all aquatic life in the Marcal River in late 2010⁸. If government goes ahead with this deal with China, open mining activities will eventually strip off most of our native vegetation in Atewa forest, resulting in loss of habitats and food for wildlife. The bauxite mining process churns out a lot of dust and red mud which is highly caustic and contains insoluble harmful substances such as aluminium hydroxide, silica, iron and titanium oxides. These have the tendency of killing animal and plant life and polluting water bodies downstream of the Atewa Range Forest Reserve.

Excessive demand for electricity, water and other considerations

Should the government decide to set up an integrated Aluminium industry, power becomes an important factor. Aluminium smelting comes with highly prohibitive electricity cost. We hold the notion that considering the enormity of power required to refine bauxite, and the power situation in Ghana at the moment, it will pose a big challenge. Power that will be required and consumed for processing bauxite should be regarded as an opportunity cost for other important businesses and industries that have struggled in the past and still struggling⁹. More importantly, there is empirical evidence to show that Chinese businesses operating in Ghana and many parts of sub-Saharan Africa have hardly traded their profit with best practices and new technology. The situation will not be different at Atewa if this deal is rolled out. It

⁷ New Patriotic Party (NPP) (2016). *Change, An Agenda for Jobs: Creating Prosperity and Equal Opportunity for All*.

⁸ <https://www.theguardian.com/world/2010/oct/.../hungary-sludge-spill-reaches-danube> [accessed March 18 2018].

⁹ https://nwww.researchgate.net/publication/234055847_The_Effect_of_Mining_Exploitation_on_Environment_in_Vietnam [accessed March 18 2018].

will be detrimental to our environment. The lessons we have learnt from activities of transnational corporations in Ghana is that, our dependence on foreign multi-nationals for technology and capital to develop our natural resources have not yielded any desired result. Not even oil has changed our situation. In the aluminium industry, where other giants with stronger economic muscles exist, we are not likely to be favoured by a vertical integration, but rather, will open up our economy for Chinese exploitation.

Health of our Ghanaian people

Communities such as sagyimase, living close to the bauxite mines will likely encounter serious health problems and social problems. The bauxite residue and dust have the tendency of causing irreparable damage to the respiratory system, eyes, the liver and skin. For instance, in 2009 a study conducted in one of Australia's bauxite mines revealed that cumulative inhalable bauxite exposure is associated with an excess risk of death from non-malignant respiratory diseases and cerebrovascular diseases¹⁰.

Agro-ecological system

Air pollution from bauxite mining have been documented to affect agricultural productivity. Pollutants from mines have a sizeable negative effect on crop yields even as far as 15km away. Pollution can generate acid rain that may deteriorate soil quality, by changing its chemistry or reducing the concentration of important plant nutrients. These effects are cumulative and long-lived¹¹. Considering Ghana's heavy dependence on agriculture, this might have repercussions on our food sovereignty and food security.

Unemployment

Inasmuch as bauxite mining has the potential to create short-term employment, it has the potential to destroy far more jobs created by agriculture than our government may think, which is inextricably linked to water provided by Atewa Forest and the livelihoods of surrounding communities. Therefore, mining bauxite at Atewa Forest has the tendency of crippling jobs in the agricultural value chain as well as destroying jobs created by other sectors that have linkages with agriculture¹². We should not forget that the agriculture sector provides significant employment to our local people.

Conclusion

Ghana's forests and associated biodiversity must be protected to guarantee the long-term provision of ecosystem services and basic needs of our present and future generations, health and security of our resource dependent communities and above all, improve the quality of life for all the Ghanaian people. In the face of a looming threat of irreversible ecological damage

¹⁰ Ali, K. (2006). Bauxite Contamination – The Long-term Effect on Health.

www.pressreader.com/malaysia/insurance/20160401/282776355718217. [accessed Feb 22, 2018]

¹¹ Aragon, F.M. & Pablo, J. R. (2014). *Polluting Industries and Agricultural Productivity: Evidence from Mining in Ghana.*, Department of Economics, Simon Fraser University: Burnaby, British Columbia

¹² Darfur, F. (2018). Atewa Forest and its Bauxite Deposit; What you didn't know about the 15 billion dollar Chinese loan. www.think.com.gh/atewa-forest-what-you-didnt-know-about-the-15-billion-chinese-loan/ [accessed Mar 19 2018]

to the Atewa Forest Reserve, it is very essential to consider the *dubio pro natura* criteria¹³ to institute proper measures to protect the Atewa Range Forest Reserve. All Ghanaians must ensure that safeguard measures to protect Atewa forest are not deferred regardless of how strong or weak the economic justifications for protecting Atewa may sound. Having learned about examples from Guinea and Vietnam, it is very difficult to be convinced that this so called Chinese investment will be carried out with the Ghanaian public interest in mind and with real environmental and economic benefits to the communities living close to the Atewa forest.

All Ghanaian citizens must add their voice to the course of protecting the Atewa Range Forest Reserve. We must speak against and resist government's planned bauxite intervention because the long-term costs obviously outweighs the short-term economic benefits. Government must rather abandon this Chinese deal and declare the Atewa Range Forest Reserve as a national park. Declaration of the forest reserve as a National Park would lead to a better protection regime to save biodiversity and ensure continuous flow of ecosystem services. All stakeholders must contribute to ensure proper governance within the forestry sector.

¹³ Friends of the Earth-International (2013). Position paper on the financializing of nature. November 2013