

Community-Based Integrated Natural Resource Management in Okyeman Traditional Area of the Eastern Region, Ghana: Socio-Economic Profile of the Okyeman Traditional Area

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Abstract

The Akyem Abuakwa State, otherwise referred to as the Okyeman traditional area, in historic times, struggled against dominant groups like the Ashantis to gain self recognition. In present times, the state has remained resolute and constitutes a strong and influential traditional authority in Ghana. The Okyeman traditional area is located in the Eastern Region of Ghana. It is endowed with rich natural resources including forest, mineral and water resources. In a survey to examine the socio-economic profile of the area and how traditional practices and taboos affect natural resource use, 426 respondents from 33 communities were randomly sampled and interviewed through questionnaire administration. The results of the analysis indicated that about 72% of the population was engaged in farming. The results also showed that traditional practices and taboos had played significant roles in natural resource management in the past, but being abandoned presently because of divergent beliefs. It was further revealed that rapid population growth from the 1960s to date and its associated production pressures was a major underlying factor in resource exploitation in the area. The activities of small-scale miners in particular were observed to be the major source of stream pollution and flow regime disturbance. The hitherto rich biodiversity of the area is at risk of being eroded if urgent steps are not taken to stop illegal activities in surrounding forest reserves. The study recommended the provision of alternative livelihood opportunities to the farming population to safeguard the rich forest resources and water bodies from further degradation.

Introduction

Akyem Abuakwa, Akyem Bosome and Akyem Kotoku are three independent states that constitute the Akyem Mansa federation of the Akan speaking people of Ghana. These states are geographically non contiguous but have clusters in parts of Eastern and Ashanti regions of Ghana. The largest of these states in terms of land size, population and natural resources endowment is the Abuakwa state presently located in the Eastern Region under the Okyeman Traditional Authority. According to history, Akyem was a splinter group of the Adansi kingdom that was conquered and

absorbed by the Ashantis in the 14th Century. After several skirmishes with the Ashantis, the Akyems broke away from the Adansi group, with the Akyem Abuakwa division moving south-eastwards across the River Pra to avoid further Ashanti attacks. Across Pra River, the Abuakwas had to contend with yet another force, the Akwamus, for territorial supremacy. They managed to push the Akwamus further east across the Volta River to establish themselves as a great kingdom at the present place of settlement (Addo-Fening, 2000, 2002). Amanor (2001) noted that major themes in the history of Akyem Abuakwa

centered on migration, the coming together of disparate groups, conflicts and wars of domination against oppression. This, according to him, revealed a state that was struggling to attain an identity in the midst of turmoil and instability during the eighteenth and nineteenth centuries. The situation under which they found themselves did not portray a state with well established conventions and customs arising from the sanctity of a long tradition of dynastic rule (Amanor, 2001). In spite of the early difficulties and struggle for sovereignty, the Okyeman Traditional Area has remained resolute and presently constitutes a strong and influential traditional authority in the Ghanaian context. This paper examined the socio-economic background of the present day Okyeman Traditional Area, the major environmental concerns, and how traditional practices and taboos have affected natural resource use in the area.

Geographical Setting

Akyem Abuakwa, located in the western half of Eastern Region of Ghana, occupies an area of about 105,472 ha and accounts for about two-thirds of modern Akyem territory. It shares boundaries with Asante Akyem and Kwahu to the north, Manya Krobo and New Juabeng to the east, Akuapem to the south-east, Agona to the south, and Asante Akyem to the west (Amanor, 2001). The Okyeman area is within the Tropical Rain Forest Zone with fertile river valleys, deep loamy soils and rich fauna. The area has a heterogeneous landscape made of mountain ranges, scarps, plateaus and adjoining valleys. The diversity in the landscape reflects different ecological zones following differences in altitude. Several forest reserves have been established in the area to preserve the rich vegetation and

associated biodiversity. The area is drained by three important rivers namely Birim, Densu and Ayensu. The Atewa range therefore serves as the main watershed for the three rivers, together with their numerous tributaries (Ayivor *et al.*, 2011).

Population

The Okyeman traditional area is made up of over 800 towns and villages within the Eastern Region and has an estimated population of about two million (GSS, 2005). The population of the area, as most other parts of the country, has been growing steadily over the years. From the 1960s to date, the population of some major towns in the area has more or less doubled as a result of migration and high rate of fertility. For example, Adoagyiri's population has grown from 4,715 in 1960 to 13,058 in 2000. Likewise Akwatia's population increased from 12,592 to 20,723 within the same period. Asamankese's population also rose within the same period from 16,718 to 34,855 (GSS, 1984, 2005). Table 1 illustrates the growth in population of some major towns in the area.

Economy: Past and Present

Land was Akyem Abuakwa's most valuable economic resource in pre-colonial times. The area is rich in agricultural lands, gold and diamonds. It is the old cocoa frontier zone in Ghana in which migrant cocoa farmers made a lot of impact during the 19th century (Hill, 1997). Before the upsurge of the cocoa industry, trade in gold and slaves were the most popular economic activities (Addo-Fening, 2000). By the third decade of the eighteenth century, trade in slaves was very important and saw exchange

Table 1
Population Growth in Major Towns of the Okyeman Traditional Area

<i>Major Towns/Year</i>	<i>1960</i>	<i>1970</i>	<i>1984</i>	<i>2000</i>
Adoagyiri	4,715	7,656	7,520	13,058
Akwatia	12,592	12,177	15,007	20,723
Anyinam	3,674	3,582	5,697	8,359
Apedwa	4,123	4,604	5,144	6,590
Asafo	2,503	2,439	3,050	3,685
Asamankese	16,718	16,905	23,077	34,855
Asiakwa	3,315	3,471	4,311	3,912
Banso	1,265	1,275	2,086	1,895
Begoro	9,289	11,043	16,890	15,941
Bunso	1,124	1,670	2,295	2,475
Kade	6,274	6,627	10,196	18,545
Kibi	5,069	5,408	7,175	9,612
Kukurantumi	5,061	6,067	8,019	10,373
Kwabeng	4,138	3,842	4,736	5,836
New Abirim	1,287	588	1,480	3,245
New Tafo	10,557	11,114	13,155	18,635
Old Tafo	4,598	4,880	5,009	5,417
Osiem	3,029	3,394	4,538	5,944
Osino	2,591	2,620	3,512	4,631
Suhum	10,193	12,421	19,298	31,044

Source: Ghana Statistical Services (1984, 2005)

of slaves on the coast principally for alcoholic drinks, firearms, ammunition, textiles and knives. The abolition of the slave trade and its substitution with legitimate trade brought about significant shifts and changes in the Abuakwa economy from the mid-nineteenth century. During this period, the gold mining industry was revived, commercial farming was given a great boost; indigenous industries received greater attention; and export and import trade were introduced (Addo-Fening, 2000).

Farming has since become a dominant economic activity of the area especially with the introduction of cocoa. Migrant farmers mostly from Krobo and parts of the Volta

Region played a major role in the development of the cocoa industries leading to the cultivation of vast plantations (Hill, 1997).

Other plantation crops popular in the area are oil palm and citrus. The main food crops are an intercrop of plantain, cassava, cocoyam, maize, yam and vegetables like pepper, garden eggs and tomatoes. Pure stands of maize, cassava and rice is also noticeable in most locations (Amanor, 2001).

Other supplementary economic activities in Akyem Abuakwa are hunting, fishing, snail-gathering and group hunting by men in search of game mostly during the dry season (Amanor, 2001). Presently, about 72% of the population is engaged in farming (Conservation International, 2002).

Social Survey and Occupational Profile

A social survey of the Okyeman Traditional Area was conducted in 2007 to determine local dependence on natural resources within forest reserves in the area.

A total of 426 respondents were interviewed from 33 communities within 10 Forest Blocks of the Okyeman area. Out of this total number, 289 representing 69% were males whereas 137, representing 31% were females. The selection of the respondents was randomly done to include adults 18 years and above who are normal residents of the selected communities. The questionnaires were designed by a research team and administered by research assistants selected and trained for the exercise. The forest blocks within whose catchment the survey was carried out together with the respective communities are indicated in the Appendix 1.

As shown in the appendix, the highest number of respondents were drawn from vicinities of three Forest Blocks namely Atewa Range Reserve (18.05%), Esukawkaw (17.10%) and Southern Scarp (16.63%). Together these constituted about 51.78% of the total number of respondents. The reason is that these three forest blocks cover relatively large geographic area and hence have more communities within their vicinity. Other forest blocks covered were Apaam (6.89%), Bunso Aboretum (5.46%), Esuboni (8.79%), Norborpong (7.36%), Nsuensa (7.36%), Okyemanpaw (5.23%) and Worobong South (7.13%).

Appendix 2 illustrates the age range of respondents from the respective communities of the forest blocks surveyed. As shown in the appendix, the highest number of male respondents was recorded in Apaam (86.66% males as against only 10.34% females). Likewise the highest number of female respondents was recorded in Norborpong with 51.61% as against 48.39% males. As illustrated in Table 2, the highest number of respondents belonged to the age group 31–44 representing 37.79% of the sampled population, followed by the 45–54 age group representing 24.05% whilst the lowest representation fell within the age range 55 and above representing 17.69%.

Table 2
Percentage Representation of Respondents by Age Group

Age Range	% of male Respondents	% of female Respondents	Total
15–30	14.01%	6.46%	20.47%
31–44	26.53%	11.26%	37.79%
45–54	16.85%	7.20%	24.05%
55+	11.58%	6.11%	17.69%

In most traditional African communities, farming is the dominant occupation. According to Udo (1978), in West Africa, about 60% of the population is engaged in agriculture. According to this survey, the dominant occupation in the Okyeman traditional area is farming. About 66.52% of the population has farming as the primary occupation, which in many cases is combined with other secondary activities. Within the Esuboni Forest Block alone, about 91.89% have farming as their primary occupation whereas Atewa, Apaam, Esukawkaw and Woropong South Forest Blocks all have over 70% of the population engaged in farming as the primary occupation. Apart from farming other primary occupations include trading representing 10.12%, other services like hair-dressing, tailoring etc (11.51%), teaching (7.20%), hunting (4.55%), extractive industry (3.34%) and manufacturing industry (3.26%). Out of the total number of respondents, 5.03% claimed they were unemployed. For most men, the primary occupation is farming whereas in the case of women, it is trading.

As Start and Johnson (2001) noted, most rural people combine occupations or what they referred to as livelihood or occupational diversity as a coping strategy. The rural people who are normally self-employed would like to engage in multiple activities as a means of security. In the Okyeman area, there is a clear evidence of occupational diversification where almost all the respondents are engaged in more than one occupation. Thus, for all the major primary activities mentioned, most respondents were noted to be engaged in one particular occupation as a primary activity

while others may be mentioned as secondary occupation.

Details of the percentage of respondents and their respective primary and secondary occupations are shown in Appendices 3 and 4. Appendices 5 and 6 additionally show the educational background of respondents and the percentage of people engaged in various activities as primary occupation, and secondary occupation respectively.

Traditional Practices and observation of Taboos in the Okyeman Traditional Area

Traditional practices and social taboos are good examples of informal institutions, where norms rather than governmental juridical regulations determine human behavior toward the environment. Many of these practices work for the preservation of habitat and ecologically vulnerable resources as well as providing long term conservation of common property (Ostrom, 1990, Colding and Folke, 2001).

In the Okyeman Traditional Area, traditional practices and taboos had played and continued to play a key role in regulating social behaviour and the sustainable management of natural resources. The analysis of responses from the field survey indicates that several categories of these practices exist though many of them have outlived their usefulness. Five categories of these practices and/or taboos were identified. These include traditional farming practices of conservation significance; bush fire prevention and prohibitions practices; forest and wildlife conservation practices; practices relating to protection of rivers and fisheries resources; and other traditional practices of socio-cultural significance. The various practices are listed below under each of the categories.

Traditional farming practices of conservation significance

- Gathering of weeds around plants to decompose in order to add nutrients to the soil.
- Use of poultry dropping as manure
- Rotational farming practices as a way of soil management
- Observance of selected days as ‘sacred days’ when people are prohibited from going to the farm.

Bush Fire prevention Practices

- Prohibition of fire on cropped farms
- Creation of fire belts around farms during the dry season
- Ban on indiscriminate bush burning

Forest and Wildlife Conservation Practices

- No entry into the forest during festive occasions and on Fridays
- No indiscriminate felling of trees
- No entry into sacred forests without permission
- No hunting on Fridays
- No eating of snails and rats in some communities

Protection of rivers and fisheries resources

- No fishing in certain rivers
- No defecation in rivers
- No swimming in certain selected rivers
- Use of chemicals in streams for fishing is not allowed
- No dumping of refuse into rivers
- Water was not fetched from certain streams on Fridays
- Prohibition of farming close to a river

Other traditional practices of socio-cultural significance

- No one was allowed to go to the farm during festive occasions

- No black pot is allowed on river “Kuku abra”
- No pounding of fufu after 6pm
- Large bundles of firewood are not carried inside the household
- No whistling at night
- A woman in her menses not allowed entry into certain rivers.

The significance of these traditional practices/taboo include natural resources conservation, pollution prevention in rivers, instilling of discipline in the people through the observance of traditional values and norms, pulling of labour force for ‘communal labour’ on certain days of the week, and prevention of theft cases on farms on festive occasions.

It is interesting to note that though most of these practices are frowned upon by some Christian groups and modernity, they have been very useful over the years in regulating environmental management and in instilling social order among the people.

Natural Resource Exploitation and Environmental Degradation

The greatest threat to the Okyeman Traditional Area, which is noted for its rich biodiversity and mineral wealth is environmental degradation. According to Clerver (1992), Ghana has lost over 80% of its forest habitat since the 1920s with just 20% left untouched. Atewa Range Forest Reserve which is a major forest landmark in the Okyeman area represents one-third of the remaining closed forest in the Eastern Region of Ghana (McCullough, 2007). However rapid population growth, rural poverty, unemployment, land shortage, illegal chainsaw operation, illegal small scale mining, stream pollution emanating from

mining operations and bad political judgment especially in granting mining licenses are factors that threaten the rich biodiversity and permanent stream flow in the area (Ayivor *et al.*, 2011). One disturbing situation is the discovery of bauxite and gold reserves within the Atewa Range Forest Reserve and the insensitivity of some political actors in granting licenses to mining companies to exploit these minerals. It is believed that when the area is opened up for mineral exploitation especially bauxite mining, the vegetation will be cleared and the topsoil and overburden beneath which the bauxite is found will be removed. This will obviously destroy the rich biodiversity within the range (Rapid Assessment Programme, 2007). A Ghana News Agency report (2010), has implicated some chiefs in the area of colluding with illegal small scale miners to perpetrate their action, which is also worrying. Moreover, government appears unable to check illegal forest exploitation leading to the fast depletion of some of the forest products. Some forest resources which respondents mentioned as dwindling were snails, bush meat and timber species including Mahogany, Odum, Obeche, and Emire (Rapid Assessment Program. 2007).

Conclusion

In conclusion, it is worthwhile to note that the Okyeman traditional area is endowed with variety of natural resources. The forest is a storehouse of biodiversity, the mountain ranges are important watershed areas while the geology constitutes an important mineral wealth. Rapid population growth and its associated high demand for land

resources are, however, major factors militating against sustainability of the natural resources the area is noted for. To ensure sustainable conservation and utilization of the natural resources in the Okyeman Traditional Area, there is the need to establish alternative income generating activities for the local communities to reduce dependence on extractive industries and forest products. This should be done as a collaborative effort between governmental and non-governmental organizations, the private sector, scientific community and local community groups. There is also the need to strengthen state institutions tasked to implement policies especially those regulating small-scale mining and forest resource exploitation.

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Appendix 3
Percentage of Respondents Engaged in Various Activities as Primary Activity

Forest Block	Nsuensa	Atewa	Apaam	Norborpong	Esukawkaw	Okyemanpaw	Esuboni	Southern Scarp	Bunso Aboretum	Worobong South
Farming	61.29%	72.36	82.75	41.91	76.39%	54.60%	91.89%	55.71%	58.33%	70.00%
Trading	16.13%	3.95	19.35	19.35	5.56%	9.10%	2.70%	14.28%	16.67%	3.33%
Other Services	16.13%	9.21	6.90	16.12	2.78%	13.64%	5.41%	15.72%	12.50%	16.67%
Teaching	6.45%	7.89	9.67	9.67	9.72%	4.55%		4.28%	8.34%	6.67%
Unemployed		5.26	3.45	6.44	1.39%	9.09%		7.14%	4.17%	3.33%
Hunting/Gathering			3.45	3.22		4.55%				
Extractive Industry		1.32	3.45	3.22	4.17%	4.55%		2.86%		
Manufacturing										

Appendix 4
Number of Respondents Engaged in Various Activities as Secondary Occupation

Forest Block	Nsuensa	Atewa	Apaam	Norborpong	Esukawkaw	Okyemanpaw	Esuboni	Southern Scarp	Bunso Aboretum	Worobong South
No Secondary occupation	51.61%	61.84	79.11%	41.92%	51.4%	63.64%	91.89	45.72	58.33%	36.67%
Farming	12.90%	11.85	6.90%	12.90%	12.5%	13.64%		25.71	12.50%	50.00%
Trading	6.46%	13.15	3.45%	12.90%	15.27%	4.55%	2.70%	12.86	8.34%	6.66%
Other Services	12.90%	9.21	6.70%	19.36%	9.72%	18.18%	5.41%	7.14%	12.50%	6.67%
Teaching				3.23%	1.39%					
Unemployed	3.23%			3.23%	1.39%					
Hunting/Gathering				3.23%						
Extractive Industry	6.46%	2.63	3.45%	3.23%	8.33%			7.14%		
Manufacturing	6.45%	1.32						1.43%		

Appendix 6
Educational Background and Number of Respondents Engaged in Various Activities as Secondary Occupation

<i>Forest Block</i>	<i>Nsuensa</i>	<i>Atewa</i>	<i>Apaam</i>	<i>Norborpong</i>	<i>Esukawkaw</i>	<i>Okyemanpaw</i>	<i>Esuboni</i>	<i>Southern Scarp</i>	<i>Bunso Aboretum</i>	<i>Worobong South</i>
No Education										
No Secondary occupation		3.95%	17.24%	3.23%	5.56%			14.29%	12.5%	26.67%
Farming					1.39%	22.72%		1.43%		6.67%
Trading	3.23%	3.95%			4.17%	4.55%	21.62%	2.86%		
Other Services				3.23%	1.39%					
Unemployed					1.39%					
Extractive Industry								1.43%		
Manufacturing								1.43%		
Primary										
No Secondary occupation	35.48%	38.16%	62.07%	35.48%	38.89%			20%	33.33%	
Farming	12.90%	1.32%			2.77%	27.27%	62.16%	15.71%	8.33%	36.66%
Trading	3.23%	6.57%		12.90%	6.94%	9.09%		7.14%	4.17%	3.33%
Petty Services	6.45%	7.89%		6.45%	8.33%	13.63%	5.41%	4.28%	8.33%	6.67%
Teaching										
Unemployed	3.23%					9.09%				
Extractive Industry	3.23%	2.63%		3.23%	6.94%			1.43%		
Manufacturing Industry	6.45%	1.32%								
Secondary										
No Secondary occupation	12.90%	13.16%	3.45%	6.45%	4.17%			10%	12.5%	10%
Farming		10.53%	3.45%	9.67%	4.17%	4.55%		8.57%	4.17%	6.67%
Trading		2.63%	3.45%	3.23%	2.77%	4.55%		2.86%	4.17%	3.33%
Petty Services	6.45%	1.32%	3.45%					1.43%	4.17%	
Teaching					1.39%	4.55%			4.17%	
Extractive Industry	3.23%				1.39%			4.28%		
Post-Secondary										
No Secondary occupation	3.23%	6.57%		6.45%	2.78%			1.43%		
Farming	3.23%	4.17%		8.11%	1.39%					
Trading							2.70%			
Petty Services			6.89%	6.45%				1.43%		
Teaching									4.17%	