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**Sustainable Fishing in Ghana: Lessons from
Indigenous Akan Fishing Ethics**

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Abstract

For many individuals in the Ghanaian culture, fishing is one of the activities that provide a source of income and nutrition. A lot has been written about fishing and its economic worth. Recently, there have been multiple complaints made by both the industry insiders and outsiders about various abuses and issues affecting the business. This has made many to wonder whether the fishing industry in Ghana is sustainable. Sustainable fishing has been a big issue of concern in Ghana. But what is sustainable fishing? Sustainable fishing, in this sense, is leaving enough fish in the ocean and other water bodies while simultaneously protecting ecosystems and endangered species. If the oceans and rivers are preserved, those who rely on fishing will be able to maintain their employment. This study investigates the phenomenon of Akan fishing ethics as well as some of the lessons that may be learned from it in order to improve Ghana's fishing industry. Because some of the abuses and issues identified in the fishing sector are caused by domestic factors, this study believes that indigenous knowledge and practices on fishing can be used together with the modern means of fishing to address the apparent challenges in the fishing industry in Ghana.

Keywords

Sustainable Fishing, Akan, Fishing Ethics, Indigenous Knowledge.

Introduction

In Ghana, certain studies on the fishing business have been carried out. Irvine¹, Lawson², Wyllie³; Hill⁴, Christensen⁵, Vercrujisse⁶, Jorion⁷, Nukunya⁸; Overa⁹, Akyeampong¹⁰, Odotei¹¹, Overa¹², Akyeampong¹³, Odotei¹⁴, and Botchway & Sarpong¹⁵. These listed scholars offer viewpoints on Ghanaian fishing. These works, however, do not consider the indigenous ways of fishing in promoting sustainable fishing in Ghana.

Even though some scholars, such as Edgerton¹⁶ and Alvard¹⁷ believe that indigenous knowledge and practices are unscientific

¹Irvine, F. R. (1947). *The Fishes and Fisheries of the Gold Coast*. London: The Crown Agents for the Colonies.

² Lawson, R. (1958). "The structure, migration and resettlement of Ewe fishing units." *African Studies*, 17 (1): 21-27

³ Wyllie, R. (1969). "Migrant Anlo fishing companies and socio-political change: A comparative study." *Africa*, 39(4): 396-410.

⁴ Hill, P. (1986). *Talking with Ewe Seine fishermen and shallot farmers*. Cambridge: African Studies Center.

⁵Christensen, J. B. (1977). "Motor power and woman power: Technological and economic change among Fanti fishermen in Ghana" in M. E. Smith (ed.), *Those who live from the sea: A study in maritime anthropology*. St. Paul, NY: West Publishing. pp. 71-89.

⁶Vercrujisse, E. (1984). *The penetration of capitalism: A West African study*. London: Zed Books.

⁷Jorion, P. (1988). "Going out or staying home: Migration strategies among Xwla and Anlo-Ewe fishermen." *Maritime Anthropological Studies*, 1(2): 129-155.

⁸Nukunya, G. K. (1989). "The Anlo-Ewe and full-time maritime fishing: Another view." *Maritime Anthropological Studies*, 2(2): 154-173

⁹Overa, R. (1998). *Partners and competitors: Gendered entrepreneurship in Ghanaian canoe fisheries*. Ph.D. Thesis (unpublished), University of Bergen.

¹⁰Akyeampong, E. (2001). *Between the sea and the lagoon: An eco-social history of the Anlo of Southeastern Ghana, c.1850 to recent times*. Oxford: James Currey.

¹¹Odotei, I. (2002). *The artisanal marine fishing industry in Ghana: A historical overview*. Accra: Institute of African Studies.

¹²Overa, R. (1998). *Partners and competitors: Gendered entrepreneurship in Ghanaian canoe fisheries*. Ph.D. Thesis (unpublished), University of Bergen

¹³Akyeampong, E. (2001). *Between the sea and the lagoon: An eco-social history of the Anlo of Southeastern Ghana, c.1850 to recent times*. Oxford: James Currey

¹⁴Odotei, I. (2002).

¹⁵Botchway, D. N.Y.M. & Sarpong, A. A. A. (2015). "Indigenous Work Ethics among Akan of Ghana." *Religions*, (2015)1. <https://doi.org/10.5339/rels.2015.work.14>

¹⁶ Edgerton, R. B. (1992). *Sick societies: Challenging the myth of primitive harmony*. New York: The Free Press.

¹⁷Alvard, M. S. (1993). "Testing the 'ecologically noble savage' hypothesis: Interspecific preychoice by Piro hunters of Amazonian Peru." *Human Ecology*, 21: 355-87. See also

and irrelevant today, I dare to postulate that indigenous knowledge can be used to contribute to environmental conservation (Colding & Folke,¹⁸; Berkes et al.¹⁹; Gadgil et al.²⁰; Ntiamoah-Baidu²¹ and Awuah-Nyamekye²². I define sustainable fishing as ensuring that fisheries thrive in both marine and freshwater ecosystems. As a result, I have set out to examine and discover how indigenous Akan fishing expertise may be applied to today's Ghanaian fishing industry.

Methodology

The research was carried out over nine (9) months in three regions of Ghana, where the Akan live, namely the Ashanti Region, the Bono Region, and the Bono-East Region, from February to November 2019. For this study, a total of 30 people were interviewed. There were 22 females and 8 males among the 30 participants. I was informed by my interviewees that fishing was more of a female dominated pastime in the Akan society than it was for men. Participants ranged in age from 55 to 80 years old. The age of the interviewees was very important since those within this age bracket would have had the knowledge and experience and also might have been involved directly in traditional Akan fishing. Those who were actively involved in indigenous fishing and those who provided assistance to those who were directly involved in indigenous fishing took part in the study. Farmers, hunters, palm wine tappers, petty traders, chiefs and queen mothers were among those who took part in the survey.

Alvard, M. S. (1994). "Conservation by native peoples: Prey choice in a depleted habitat." *Human nature* 5:127-54.

¹⁸Colding, J. & Folke, C. (1997). 'The relations among threatened species, their protection, and taboos.': *Conservation Ecology*, 1(1):6 -17

¹⁹Berkes, F. Folke, C., Gadgil, M. (1995). 'Traditional ecological knowledge, biodiversity, resilience, and sustainability', In Perrings, C. A., Maler, K.-G., Folke, C. Holling, C. S. & Johnsson, B.O. (Eds.). *Biodiversity Conservation: Problems and policies*. Kluwer Academic Publishes, Dordrecht, the Netherlands.

²⁰Gadgil, M., Berkes, F & Folke, C. (1993). 'Indigenous knowledge for biodiversity conservation', *Ambio*, 22:151-56

²¹Ntiamoah-Baidu, Y. (2008). 'Indigenous beliefs and biodiversity conservation: The effects of sacred grooves, taboos and totems in Ghana for habitat and species conservation', *Journal for the Study of Religion, Nature and Culture*, 2(3):309-26.

²²Awuah-Nyamekye, S. (2009). 'Salvaging nature: The Akan religio-cultural perspectives.' *Worldviews: Global religions, culture and ecology*, 13(3):251-82. See also Awuah-Nyamekye, S., (2014) 'Managing the Environmental Crisis in Ghana: the role of African Traditional Religion and Culture with specific Reference to the Berekum Traditional Area.' *Cambridge Scholars Publishing*.

The researcher had group interviews consisting of three to four people. I asked permission to tape-record all the interviews. The Akan language (Twi) was the main medium for the interviews. Some of the sample questions that guided the study are listed below: What are some of the traditional methods of fishing in your area? What were some of the implements used in indigenous fishing? Was fishing done in groups or by individuals? Was there any day set aside for no fishing? Were there any particular traditional means employed to enable the fish stock to replenish? Did religion play a role in fishing in indigenous societies?

Based on the responses of my participants, I asked follow-up questions. The following themes emerged from the transcription and coding of the interviews: Traditional methods of fishing; implements of fishing; Traditional means of replenishing fish stocks; Traditional taboos regarding fishing; off-season for fishing; religion and indigenous fishing.

The Akan

The Akan form the largest ethnic group in Ghana. The Ghana Statistical Service on 22nd September 2021, released a preliminary result of the 2021 Population and Housing Census (PHC). According to the results, Ghanaians are 30.8million. Among the total population, Akan are 47.5% of Ghana's population²³. Traditional Akan jobs include farming for those who live in the interior areas, fishing for those who live by the coast, and trade, especially for women (Rattray²⁴; Omanyo²⁵). They may be found in two distinct parts of Ghana's landscape: the tropical rain forest and the south-bound coastal shrub²⁶. The Ashanti, Akyem, and Akuapim are Akan tribes that live in the woodland zone, whereas the Fantis live in the coastal region. "The Akan people are divided into linguistic sub-groups. Each group's language is described as a dialect of the Akan language; however, most dialects are mutually intelligible"²⁷.

²³ Source: www.census2021.statsghana.gov.gh.

²⁴Rattray, R. S. (1923). *Ashanti*. Oxford, UK: Oxford University Press.

²⁵Omanyo, C. N. (2001). Akan religion, in Glazier Stephen D. (ed.), *Encyclopedia of African and Africa American religions*. New York/London: Routledge.

²⁶Botchway, D. N.Y.M. & Sarpong, A. A. A. (2015). "Indigenous Work Ethics among Akan of Ghana." *Religions*, (2015)1. <https://doi.org/10.5339/rels.2015.work.14>

²⁷Awuah-Nyamekye, S. & Oppong, J. (2018). 'The myths surrounding the tramo (the Bongo antelope- *Tragelaphus Eurycerus*) and fauna conservation among the Akan of Ghana: A critical analysis.' *Research on Humanities and Social Sciences*, 8(16): 85-92

Akan Ethics

Many scholars including Ackah,²⁸ Danquah²⁹ and Sarpong³⁰ have written on Akan ethics. Anderson (2013) defines, traditional-Akan ethics as the unadulterated practical normative science of the moral values, ideas and behaviour of the traditional Akan people of Ghana³¹. By Akan ethics in this paper, I mean the indigenous set of laws, norms, and values that the Akan people have established in their society. These are found in the people's rituals, traditions, wise sayings, myths, and taboos. This brings me to the Akan's religious-cultural lives or worldviews. According to Kraft, "the collection of culturally organized beliefs, values, and commitment or allegiance underpinning a people's perception of reality and their response to those perceptions" is the worldview³². Worldview, in Kraft's viewpoint, is not dissimilar to culture. To support this claim, Guba (1990, p. 17), as referenced by Creswell (2014), defines worldview as "a fundamental set of ideas that influence action"³³.

The Akan's worldview has greatly aided them in comprehending the world and informing how they react to it. This understanding is known as 'cosmovision.' "Cosmovision" is defined as "assumed interconnections between the human, natural, and spiritual realms," according to Botchway and Sarpong³⁴. As a result, the Akan people thought that religion had a part in their daily lives. Hence, their religious views governed their agricultural and fishing operations. They honoured the land as a gift from the highest god because they felt *Onyame* was the rightful owner. They avoided any actions on the property that may cause disaster or have a detrimental effect on their farming operations. As an agricultural and maritime people, the Akan's ethics are primarily conservation-oriented. As a result, they have taboos and punishments that

²⁸Ackah, C. A. (1988). *Akan Ethics. A study of the moral ideas and the moral behaviour of the Akan tribes of Ghana*. Accra: Ghana Universities Press.

²⁹Danquah, J. B. (1944). *The Akan doctrine of God: A fragment of Gold Coast ethics and religion*. London, UK: Lutterworth Press

³⁰Sarpong, P. K. (1972). Aspects of Akan ethics. *Ghana bulletin of Theology*, 4(3): 40-54.

³¹ Anderson, G. (2013). Traditional Akan Ethics: Relevant or Trash to Ghanaians Today? *International Journal of Humanities and Social Sciences*, Vol. 4 No. 1, pp.59

³²Kraft, C. H. (1999). Culture, Worldview and Contextualization. In R. D. Winter and S.C. Hawthorne (eds.) *perspectives on the world Christian movement*. 3d. ed. Pasadena: William Carey Library, p. 20

³³ Creswell, J. W. (3rd edn.) (2014). *Research design: Qualitative, Quantitative and mixed method approaches*. Nebraska-Lincoln: University of Nebraska-Lincoln

³⁴Botchway, D. N.Y.M. & Sarpong, A. A. A. (2015). "Indigenous Work Ethics among Akan of Ghana." *Religions*, (2015)1. <https://doi.org/10.5339/rels.2015.work.14>

govern their agricultural and fishing operations, which may be relevant to today's Ghanaian culture.

Results

Traditional methods of fishing

I enquired from my informants the nature of fishing in traditional Akan society. An informant had this to say: “we used to go fishing during the dry season, when streams and rivers were dry (i.e., water bodies had nearly dried out)”³⁵. I was informed that fishing was sometimes carried out in groups with a leader or as an individual venture.

During the data collection stage, two principal traditional methods came up. These are, *Ahwee* and the use of *Nsoa* (fishing basket). The implements involved as mentioned by my informants included: cutlass and hoes which were used to create a hole and then erect a temporary embankment across the river. I was told that the cutlass was also employed in circumstances where larger fishes needed to be cut into smaller pieces. They also scooped the water trapped in the earmarked area with a calabash (*apakyie*). A drainer constructed of palm fronds was another instrument that was utilised in traditional Akan fishing.

I devote the following paragraphs to the description to the two principal indigenous fishing methods--*Ahwee* and the use of the *Nsoa* – mentioned to me by my key informants.

Ahwee

One explained that with this particular method, an expert who is able to locate where the fishes can be harvested is needed. This is because to be able to do this requires a lot of experience. When the spot is identified we do the following:

When we arrive at the stream or river, with about six (6) people or more, our leader determines a place where the fishes are likely to be trapped and harvested. We earmark an area for the embankment in the river. We put up two embankments facing each other. The embankments are erected so as to prevent the

³⁵Personal conversation with a farmer/fisherman on August 28, 2019.

fishes from moving out of the earmarked area. Thus, without the embankment, it becomes absolutely difficult to restrict the movement of the fishes and this would obviously militate against our efforts of making a catch. One embankment is raised higher than the other one. This prevents the overflow of the river into the earmarked area. We put some plantain suckers in there to form an embankment with mud to support it from collapsing. We did a similar embankment on the opposite side of the river to also stop the flow of the river into our earmarked area. After an embankment is erected, each member carried his or her tools for the fishing activity (such as a basket, a basin, a cutlass, hoes, shovels, mattocks, drainers (*demirekuo*), and so on). With the embankment in place, we began the scooping (*ahwee*) from the earmarked area.

We did this to the point where the river level is lowered to expose the fishes within the earmarked area. The drainer was then used to scoop out the mud in which the fish were stacked. After that, we would pick up the fishes that had been gathered in the basket with our hands.”³⁶

The narration above was also corroborated by other respondents.

During the research, I discovered that in the past, males in the community were responsible for constructing the embankment, while women were responsible for collecting water from the earmarked area. Where males were absent, however, the women took it upon themselves to build the fishing embankment.

When I inquired how they were able to detect the location of the fish, one respondent said that one of the signals that a site would contain a stock of fish would be an area where there was a broken or dead log in the river³⁷. Another participant said that deep places (*ebunum*) where one observes the ripple effect of the fish movement in the river were considered as areas where one can find

³⁶Personal communication with respondent #3 on March 17, 2019.

³⁷Personal communication with respondent #10 on September 23, 2019.

a stock of fishes³⁸. When I enquired to know what happened to the embankment after the fishing had been done, one respondent said that the embankment is destroyed to allow the free flow of the river³⁹.

Nsoa (Fishing basket)

Apart from *ahwee*, as I have indicated above, is the use of a special fishing basket known in the traditional Akan society as *nsoa*. I was informed that the *nsoa*, is specifically designed for fishing purposes.

The preparation of the *Nsoa*

It is made up of about 6-8 long palm fronds or canes of the same length woven or tied together at one end. A hoop is fitted in the tied end to give it a conical shape. A twig is woven around each stick from the base to the top thereby giving it only one opening. A relatively small funnel-like basket is made in the same fashion. A bait is placed at the base of the *nsoa* and the funnel-like basket is fitted in the *nsoa*. This funnel-basket is used to enclose the opening of the fishing basket, *nsoa*. The narrow bottom opening of the funnel-like basket is to prevent the escape of the entrapped fish.

A photo of *Nsoa*



Source: https://www.researchgate.net/figure/Picture-of-a-traditional-fishing-basket-called-xisseka-taken-during-in-depth-interview-in_fig4_291690992.

³⁸Personal communication with respondent #14 on February 7, 2019.

³⁹Personal conversation with #7 on February 13, 2019.

How *Nsoa* is used in fishing

According to my informants, when the *nsoa* is ready for use, the hunter (s) or fisherman takes it to the riverside and puts a bait in it and sets it vertically in the middle of the river. It is kept stable by setting it in-between two strong sticks purposely planted in the course of the river to keep it stable at one place. The hunter (s) will go to the site to inspect the trap by removing it from the water and take (s) away the fishes that have been entrapped in the *nsoa*. This inspection is done every three days. This method I was told, does not require many people due to its nature and it could be used by only one person.

Traditional means of replenishing fish stocks

An interesting component of the study was when I posed the question to respondents regarding the traditional methods that were used to replenish the fish stock. One respondent had this to say

“Our people were very witty in the sense that the drainers had holes that could not hold the fingerlings so they could drop through. In that way, we got only the older or matured fishes to be harvested for consumption. Through this means, the fingerlings had a chance to live on longer and reproduce before they could be harvested for consumption⁴⁰”.

One informant also intimated that “there were occasions when the group leaders would advise those on fishing expedition that in an event the fingerlings are accidentally harvested or trapped, they were to be thrown back into the river so as to give them a second chance to live on and improve the fish stock for the subsequent years⁴¹”.

Still on this issue of fish stock replenishment, an informant noted that “in some cases when they caught a crab or a fish having eggs, a sign of fertility, they would throw it back so as to give it a chance to populate the fish stock⁴²”. Furthermore, a respondent

⁴⁰Personal communication with #27 on June 28, 2019.

⁴¹Personal communication with #12 on August 16, 2019.

⁴²Personal communication with #14 on October 11, 2019.

also said that - “*pitire*, a type of catfish, which was very rare, was also thrown back into the river whenever it is harvested to give it a chance to multiply so that it would not go into extinction⁴³”.

Corroborating the above views, a respondent observed that the seasonal calendar (i.e., rainy and dry seasons) offered a means for the fish stock to replenish itself. This was because, it was not possible to undertake fishing expedition in the raining season. Moreover, in the dry season, the river level was low and the movement of the fishes easily rippled the river which became an indication of the season for fishing⁴⁴.

Another important element in the conservation or replenishing of fish stock was the roles of the gods and the myths surrounding Akan fishing practice. In a respondent’s submission, she underscored the fact that “traditional myths and stories about the consequences suffered by those who flouted the orders of the river gods also served as a mechanism of safeguarding the fish stock⁴⁵”. In some cases when they caught a crab or a fish having eggs within itself, a sign of fertility, they may throw it back so as to give it a chance to populate the fish stock. Again, a type of catfish called *pitire*, which was very rare was not supposed to be harvested. Thus, to keep up the fish stock, they will throw it back into the river whenever it was harvested to give it a chance to multiply so that it would not go into extinction⁴⁶.

Traditional taboos regarding fishing

From my interaction with the respondents, it came to the fore that taboos regarding indigenous Akan fishing vary from place to place. It was a taboo for menstruating women to participate in fishing expedition because they saw it as unhygienic and could contaminate the fish stock. Also, at *Fawoade* in the Ashanti region, it was reported that if a menstruating woman went to the *Ankani* river on a Tuesday, she would not be able to trace her way back home⁴⁷. Defecating along river bodies was also considered a taboo. However, according to one respondent, in his area, there were no specific taboos regarding fishing but as a sign of goodwill or respect to the river god, they would present mashed yam or

⁴³Personal communication with #24 on April 3, 2019.

⁴⁴Personal communication with #21 on November 10, 2019.

⁴⁵Personal communication with #19 on June 15, 2019

⁴⁶Personal communication with a chief on March 23, 2019.

⁴⁷Personal communication with queen mother on September 8, 2019

plantain and eggs with the following words, 'Nana we are here to get something to feed on, and we offer this as a token to you'⁴⁸.

Another respondent added that menstruating women who went on a fishing expedition were seen as an embarrassment and something frowned upon by the Akan community. In fact, this respondent said the presence of a menstruating woman at a fishing site was a taboo that could spell doom for the entire community. This could bring about strange sicknesses among the people and also drastically reduce the catch made by those who attempted fishing in the river⁴⁹.

In addition to these specific taboos, I also noticed that the Akan in general do not undertake fishing expedition on sacred days such as *Fofie*, *Akwasidae* and *Krudapaakuo*. Respondents expressed the notion that the river gods took a rest on these days and hence needed silence and a peaceful atmosphere for resting. Another rule that could be seen as a taboo was that one cannot defecate around the river body because "it is believed that the river served as a source of food and so it was considered a taboo for one to contaminate the river body. Also, the river is revered as a goddess hence, it must be accorded all respect and not messing up around it"⁵⁰.

Off-season for fishing

In trying to find out if the indigenous fishing activity was an all-year-round affair, I was made to understand that there was an off-season for fishing from March till September. The off-season for fishing in the opinion of my informants was within a period of four (4) to five (5) months (October, November, December, January, February). During the off-season (i.e., the raining season), it became very difficult to control the current of rivers and so one could not engage in fishing expedition around that time of the year⁵¹. It came to the fore through my discussion with the participants that around December, was the opportune time for fishing, since by then the fishes had given birth and so it could not disrupt the natural cause of replenishing the fish stock in the system. One respondent stated and it was corroborated by other interviewees that "the off-season was a time we took a break from fishing and allowed the fish to

⁴⁸Personal communication with #8 on July 20, 2019.

⁴⁹Personal communication with #6 on May 6, 2019.

⁵⁰Personal communication with # 22 on August 11, 2019.

⁵¹Personal communication with a hunter on September 29, 2019.

replenish itself and it gave us a respite from fishing and it gave us enough time to attend to other jobs like farming, hunting and setting of traps for game⁵².

Religion and indigenous fishing

In my desire to know whether there is a linkage between religion and indigenous fishing, I solicited the views of my respondents. I found out that religion had a role to play in indigenous Akan fishing. To buttress this point, one respondent said “we believed that the gods had control and authority over the river bodies and so whenever we offered a token of mashed yam or plantain and eggs, we had a bumper catch”⁵³. This token of mashed yam or plantain and eggs is either placed by the riverside or sprinkled on the surface of the river.

Another informant corroborated this point when she said that “there were occasions where we could not have a catch because we failed to provide the river god with a token before our fishing expedition”⁵⁴. One participant submitted that “whenever there was a communication from the gods through the traditional priests regarding our actions, we were ready to go through with the message or the command,”⁵⁵. This submission by my informant reinforces the idea that people's worldviews have an impact on their behaviour. This also demonstrates the relevance of expressing the Akan worldview in this research.

Discussion

My interlocutors appeared to have prior knowledge and expertise in indigenous fishing based on my conversation with them. They were very knowledgeable about indigenous Akan fishing and its ethics. Their presentation was intriguing, and they were very eloquent in describing the methods of fishing. It is very clear from the presentation that the traditional Akan had their own methods of fishing namely the *ahwee* and the *nsoa*. Several of my interviewees agreed with each other on these two main methods of traditional Akan fishing. The *ahwee* method brought into focus, the practice of erecting an embankment at an earmarked area. This

⁵²Personal conversation with #18 on July 4, 2019.

⁵³Personal communication with #27 on May 14, 2019.

⁵⁴Personal communication with #28 on November 26, 2019.

⁵⁵Personal communication with #22, a farmer on August 19, 2019.

demonstrates how skillful the traditional Akanwere in undertaking fishing expedition. Since they lived close with nature, they were able to observe the patterns and seasonal occurrences--high tides and low tides, dry and rainy season. It is very fascinating to know how in traditional Akan fishing, they were able to locate, the fishes in the fishing expedition. It takes an experienced person to locate the area where there could be a swamp of fishes to be harvested. This leader must have a sense of judgment and be able to read the signs to locate where the fishes are in the river. *Nsoa*, unlike the *ahwee*, does not require many hands to be employed. Hence, in a situation where they lacked many hands, they would resort to the use of *nsoa*. From the narration it is clear that, when they wanted fish for immediate consumption, they opted for the *ahwee* and not the *nsoa* that would take about three days to be inspected. One thing that has been clear from the discussions so far is that, traditional Akan fishing defeats the proposition that traditional knowledge is unscientific as suggested by Edgerton⁵⁶ and Alvard⁵⁷. In view of this, one can submit that indigenous knowledge can complement scientific knowledge to develop and sustain our fishing practice.

Another equally important area of this research concerns traditional taboos regarding fishing in the traditional Akan community. As has been pointed out earlier on, it was a taboo for menstruating women to participate in fishing expedition because they saw it as unhygienic and could contaminate the fish stock. Defecating along river bodies was also considered a taboo. There were fines imposed on persons who went on fishing on sacred or forbidden days. In some areas also, persons who flouted laws or regulations regarding fishing may be asked to slaughter a sheep to pacify the gods. The chiefs were the custodians of the laws in the traditional society and they punished culprits⁵⁸. It impacted positively on the traditional Akan fishing practice. In modern Ghanaian communities, we find a lot of abuses including defecating around river bodies, contamination of our water bodies with plastic waste and other contaminants. Policies and legislations

⁵⁶ Edgerton, R. B. (1992). *Sick societies: Challenging the myth of primitive harmony*. New York: The Free Press.

⁵⁷ Alvard, M. S. (1993). "Testing the 'ecologically noble savage' hypothesis: Interspecific prey choice by Piro hunters of Amazonian Peru." *Human Ecology*, 21: 355-87. See also Alvard, M. S. (1994). "Conservation by native peoples: Prey choice in a depleted habitat." *Human nature* 5:127-54.

⁵⁸ Appiah-Opoku S., (2007). 'Indigenous Beliefs and Environmental Stewardship: A Rural Ghana Experience.' *Journal of Cultural Geography*.

alone might not bring about the needed change and sanity that we wish to have in our fishing space that could lead to sustainable fishing in Ghana.

Another area worthy of comment is that of the practice of the off-season in traditional Akan fishing. According to my informants, the off-season gave them a resting period and also enough time to attend to other jobs like farming, hunting and setting of traps. The off-season also supported environmental conservation and allowed fingerlings to develop and breed. This practice is commendable, and corresponds to the One Month Off-Season policy that the present government has implemented in the Ghanaian fishing industry. However, there is a need for more extensive interaction with individuals involved in the fishing value chain in order to iron out the disagreements in the policy and ensure that a larger number of people benefit from it, leading to sustainable fishing in Ghana.

Furthermore, the information provided by my respondents on the methods used to allow the fish stock to replenish itself are quite useful. The fingerlings were safeguarded from being captured and collected by using drainers with narrower pores to provide an escape for the fingerlings should they be trapped in the drainers. In so doing, the fingerlings were therefore safeguarded and given the opportunity to live longer and reproduce before being harvested again. This supports Botchway and Sarpong's results, which state that among indigenous fishing groups, "the use of nets and methods that would catch fingerlings is thereby discontinued"⁵⁹. In my research, I found out that on occasions where the fingerlings were accidentally harvested or trapped, the group leaders would advise those on the fishing expedition to throw the fingerlings back into the river to give them a second chance to live on and improve the fish stock for the subsequent years. The implication is that they had a "sustainable" mind. They thought about the future generation. This affirms the Akan proverb "*adidi daa na eye na enye adidi preko*" to wit, having something to bite every day is much better than having one's fill in a day and going hungry thereafter.

The responses that I gathered from my study in respect of replenishing the fish stock clearly demonstrates the fact that the indigenous Akan people in the past paid close attention to replenishing the fish stock. The mechanisms were very laudable and it clearly point to the fact that they did not think solely about

⁵⁹Botchway, D. N.Y.M. & Sarpong, A. A. A. (2015). "Indigenous Work Ethics among Akan of Ghana." *Religions*, (2015)1. <https://doi.org/10.5339/rels.2015.work.14>.

their own sustenance but thought of the future generations who could also benefit from the fish stock. A significant point worthy of note is the role of the gods and myths in Akan fishing practice. The traditional Akan believed that the gods could punish them if they flouted their instructions about their fishing practice. Furthermore, the chiefs and the opinion leaders could punish the fisher-folks if they flouted the directions of the gods. This approach guided their fishing practice and inured to their benefit.

People in the forest areas where my research was conducted regarded the rivers in their territories as sacred, much as those in the southern zone of the nation saw the sea as a deity. "The river is considered as a goddess," one respondent added, "therefore it must be granted utmost respect and no messing up around it."⁶⁰. Furthermore, I was told that individuals who went on fishing expeditions performed sacrifices and offered gifts in exchange for a good or bumper harvest, which supports A.P. Brown's (1936) argument about "the predominance of rites and beliefs related with fishing of sea deities"⁶¹.

Some people are of the view that the indigenous system is unscientific (Edgerton⁶² and Alvard⁶³), but from the foregoing discussion it is clear that this view is not wholly true. For instance, the people know when the fishes lay their eggs as well as the harm the chemical substances such as DDT can cause on marine or water life and human beings as well. It has also been pointed out how they safeguarded and protected the fingerlings for sustainable fishing. Chemicals like DDT and mercury are forbidden, according to my responders, since they are harmful to human health and the fish stock's long-term viability. According to one respondent, "the usage of chemicals, as well as defecating near the river, is frowned upon." This safeguarded the livestock while also ensuring adequate supplies for future years⁶⁴. This ban might possibly be due to "the respect of the sea causes the fishers to stop using hazardous

⁶⁰Personal communication with #22 on April 14, 2019.

⁶¹Akyeampong, E. (2001). *Between the sea and the lagoon: An eco-social history of the Anlo of Southeastern Ghana, c.1850 to recent times*. Oxford: James Currey, p. 121.

⁶² Edgerton, R. B. (1992). *Sick societies: Challenging the myth of primitive harmony*. New York: The Free Press.

⁶³Alvard, M. S. (1993). "Testing the 'ecologically noble savage' hypothesis: Interspecific prey choice by Piro hunters of Amazonian Peru." *Human Ecology*, 21: 355-87. See also Alvard, M. S. (1994). "Conservation by native peoples: Prey choice in a depleted habitat." *Human nature* 5:127-54.

⁶⁴Personal communication with #20 on November 2, 2019.

chemicals to fish, lest they contaminate it"⁶⁵. This restriction, I feel, may still be imposed today since some fishermen still use DDT, mercury, other chemicals, and light in their fishing, which do not contribute to the development, growth, and sustainability of fishing in Ghana.

All said and done, traditional Akan fishing methods had its advantages of ensuring that the fingerlings were protected and also kept the fish stock from extinction. Traditional Akan fishing ethics ensured that every fish collected is healthy and good for human consumption while very rare fishes were also protected from extinction throughout the fishing expedition.

Conclusion

The current study adds to the literature on fishing in Ghana by incorporating lessons learned from indigenous Akan fishing ethics. As a result, it is critical for us to recognise that indigenous wisdom may assist us in resolving certain current socio-economic and political challenges. The study's findings revealed people's understanding of indigenous Akan fishing ethics and the ethical standards that governed fishing expeditions in the past. The importance of the knowledge on indigenous Akan fishing ethics is that it can help to resolve some pertinent issues that stifle our attempt as a nation in fashioning out a sustainable fishing industry in the modern fishing environment.

I am therefore advocating that there should be a collaboration and dialogue between the central government with our chiefs to know how to bring back sanity in the fishing industry that will lead to sustainable fishing. Furthermore, to achieve sustainable fishing, I believe the Ministry of Fisheries and Aquaculture should involve fishermen and other stakeholders in discussions on the need to protect, conserve, and employ best practices in order to ensure sustainable fishing in Ghana.

I propose that we can draw a lesson from the practice of the Akan people having posterity in mind in their fishing activities so that our fishing practices are not solely directed by the gains of today but also the preservation of marine life for sustainable fishing in Ghana.

I submit that the practice of the off-season in traditional Akan fishing is an ethical practice that can aid in the development

⁶⁵Botchway, D. N.Y.M. & Sarpong, A. A. A. (2015). "Indigenous Work Ethics among Akan of Ghana." *Religions*, (2015)1. <https://doi.org/10.5339/rels.2015.work.14>, p 47.

of sustainable fishing practices in Ghana. Even though, the Ghana government has done and is still doing a lot (Ministry of Fisheries and Aquaculture Development Fisheries Commission: Fisheries Management Plan of Ghana a National Policy for the Management of the Marine Fisheries Sector 2015-2019) in terms of mitigating some of the bad fishing practices such as bad nets and light fishing, a lot more has to be done and we can learn from the above traditional Akan fishing practice.

In response to the tendency of certain fishermen using unauthorised nets and practices in fishing, it would be detrimental to the fingerlings and would not position the country to have sustainable fishing. I dare recommend that sanctions against those who flout laws and policies regarding fishing can go a long way to bring about sustainable fishing in Ghana today.