INTRODUCTION TO THE MEDIA COLLABORATION AND PREVENTION MODEL: ENVIRONMENTAL COMMUNICATION PERSPECTIVES ON THE PREVENTION OF INFORMAL GOLD MINING IN ZAMFARA, NIGERIA

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ABSTRACT

Informal artisanal and small-scale gold mining (ASGM) operations in Nigeria have contributed to serial lead poisoning in children and women. In 2010, 400 children were killed in three local governments in Zamafara and in 2015, likewise, 28 in Niger. These facts reinforce the presumption that frequent lead contamination and resulting venomization cases were responsible for informal activities in the gold belt states such as Osun, Kwara, Kogi, Niger, and Kaduna Kebbi Zamfara. This article explored the role of environmental communication in controlling informal mining of gold in Zamafara, Nigeria. An environmental communication model on six typologies of media collaboration was proposed for the categorization of collaboration types. This paper has found challenges on cooperation between media and other stakeholders and concluded with solutions on collaboration challenges.

Keywords: Collaboration, Informal Gold Mining, Media, Stakeholder, Zamfara.

INTRODUCTION

The processing of gold started in the 19th century in Nigeria (Teriba, 2019). During the Second World War, gold production plummeted in the 1940s leading up to the Nigerian civil war in the 1960s, resulting in colonial and foreign firms abandoning mining sites (Blade, 2019. The Nigerian government founded the Nigerian Mining Corporation (NMC) in the 1980s to search for gold (Teriba, 2019). Nigeria's solid minerals and mining industry added 0.5 percent to the Gross Domestic Product (GDP) in 2018 from 5.0 percent in the 1960s to an annual production of 40 million metric tons. However, no data were available on the precise amount of gold produced in the country (Olade, 2019). There are three primary reasons for the shortage of gold mine records in Nigeria. Second, the available artisanal and small-scale gold mining (ASGM) operations are primarily informal; thus, no formal contributions have been made to the economic sector (Environmental Law Institute, 2014). Second, large-scale gold mining (LSGM) has just recently begun in the country (Teriba, 2019). Finally, the gold produced is smuggled out of the country annually (Olade, 2019); thus, documents are not available. However, Olade has quantified that the amount of smuggled gold annually amounts to 10,000 kg (2019).

ASGM applies to low-technology and intensive labor in the mining and refining of small quantities of gold by people who lack investment, have limited consumer access and social facilities, poor health and safety requirements that have a significant effect on the climate (Buxton, 2013, p. 1; Hilson, 2013, 2016; Hilson, Maconachie, McQuilken, & Goumandakoye, 2017, p. 80). Supporting this statement, Chen (2012, p. 6) observed that it is casual to carry out



illegal ASGM activities. In terms of its legitimacy, ASGM practices are rampant worldwide. In Africa, Latin America and southern Asia, ASGM practices are standard (Buxton, 2013; Hilson et al., 2017). Studies have shown that 70.0 to 80.0 percent of ASGM operations are informal (Intergovernmental Forum, 2017), with gold miners using non-official land (Hilson et al., 2017; Owusu et al., 2019).

ASGM operations' benefits are an immediate and direct local economic improvement, including household (Buxton, 2013). Studies reported that locals receive more income from gold mining than in agriculture and forestry-based industries (Hilson et al., 2018; Zolnikov, 2020). In Sub-Saharan Africa and Asia, many gold miners combine mining with agriculture and use gold mining revenue to employ additional workers, buy fertilizers and other agricultural inputs (Hilson, 2016; Intergovernmental Forum, 2017). The integration of mining and farming practices indicates that ASGM operations complement a primary revenue earner in agriculture. Also, some miners have been able to use the gold mining revenue to build homes, buy cattle and vehicles, including supplying their kids with school. Other miners have also used gold mining revenue to invest in other businesses to become less dependent on ASGM operations (Hilson, 2016).

Informal gold mining in Zamfara and its effects have drawn attention not only to the health threats associated with everyday gold miners' practices for themselves, society and the community but also to the informality of their operations (Jubril et al., 2017; Salati et al., 2014). Attention was paid to the media incident, which has corroborated that of government at all levels, non-governmental organizations (NGOs) and international donor agencies. Despite the media pause in setting the agenda for informal gold mining and its effect across Nigeria and beyond, there has been a sense of cooperation between media houses, non-media organizations, and individuals to attract policymakers' attention to improve the situation (Pringle, 2015). For example, individuals such as Hamzat Lawal and Oludotun Babayemi used the media and launched a social network movement, 'Follow Nigeria's Wealth' and #SaveBagega.

ROLE OF MEDIA AND OTHER STAKEHOLDERS IN THE CONTROL OF INFORMAL GOLD MINING

People prefer to understand an issue if they are motivated by a certain amount of knowledge (Grunig, 1976), so information on the detrimental effects of informal mining is a way of encouraging informal miners with actionable intentions. Also, details on recognizing everyday ASGM operations can persuade informal miners (Buxton, 2013). However, Buxton clarified that knowledge involves the media and 'intermediaries' to create the inference diffusion theory.

As intermediaries, informal gold miners are provided with information by the media and other stakeholders. In the regulation of informal gold mining, these two elements are crucial (Buxton, 2013). The media and other stakeholders should view and clarify the essential issues surrounding informal gold miners' lives and careers. Accordingly, media and other stakeholders' understanding will result in public perception (and gold miners) and affect their environmental and professional attitudes (Mohamad Saifudin, 2017). Despite the relevance of this field of research (Hilson et al., 2017), the effect on the civilization of informal gold mining (Sauerwein, 2019) and the prevalence of activity in several countries (Intergovernmental

Forum, 2017), scholars have made little effort to examine the role of media and other players in regulating informal gold mining in general and in particular in Nigeria.

Also, researchers have pointed out the media's effect on the views of the people. There is a close association between media-addressed environmental concerns and public opinion (Aerts & Cormier, 2009). However, informal gold miners (Tirima et al., 2016) can need additional input or reminders from stakeholders with impact on their operations, such as community officials, governments, media and NGOs, for informal gold miners whose career allows them to be distant from the broader society.

In comparison, media interaction with other partners, such as society's leaders, can help the notion of journalists' effort to be impartial. Objectivity, as leaning positivists, allows journalists to wade up powerful objections that can harm the reliability of listeners, audiences and readers of media material (Martine & De Maeyer, 2019). The media and journalists liaise with their sources and credit them. The people who have a stake (either stakeholder) in the informal gold mining news outlets. Journalists are expected to cooperate and retain daily communication from which they receive a tip and or validate the information in the liaison process and their day-to-day activities; the report formed creates, generally, a relationship (Waisbord, 2011). As a result, a viable media partnership has arisen (Stonbely, 2017), and stakeholders have managed to demonstrate their power play in some cases by shaping the media agenda (Hunter et, 2013)

Therefore it is essential to recognize future media partnership partners to prevent unnecessary agenda-setting for the media. In addressing this question, available studies suggest that the media prefer to collaborate in preventive action with other players. In informal gold mining, the media is often cautious when interacting with other media sources (Stonbely, 2017).

MEDIA-MEDIA COLLABORATION

Collaboration between the media and newsrooms was first undertaken by corporate employees and is increasingly active at the operational level (Hatcher & Thayer, 2017). The Associated Press (AP) wire service news agency's founding in 1846 (Stonbely, 2017) facilitates this partnership. Downie & Schudson (2009 p. 73) defined cooperation semblance and veneer life before AP's collaboration after the US Post Office Act of 1792 helped newspapers with a subsidy to "mail copies to each other free of postage, providing the first joint news reporting." A specific analysis found 44 different current partnerships in the same year between 500 individual media newsrooms among the research analyzed. Developmental and local problems (Stonbely, 2017) such as environment, climate, agriculture, history, custom, election (Moore & Hatcher, 2018) and gold mining (Pew Research Centre, 2014) are a large number of these media partnerships.

This collaboration between different media institutions to discuss a public concern (according to the principle of inter-media agenda-setting) could contribute to the development of strong visibility and scope beyond the coverage and latitude of single activities in the newsroom (Konieczna, 2020). Konieczna identified three types of collaboration between media organizations: sharing resources, including equipment or content, collaborating to produce

content, and hyperlinking. Given this analysis, informal gold miners who may have ignored a message aimed by one media to affect their actions may see the same or identical message in another media source (Valenzuela et al., 2017).

In comparison, in the case of broadcast media such as radio and television, the discrepancies in primetime between media houses could have an advantage in this regard. Some research, especially during elections, has shown the fear of a real intermediate agendasetting power (Vonbun et al., 2016). Another study, however, implied optimism and reported instances of intermediate potential to set a schedule and produce a meaningful behavioral change in persons (Pezzullo & Cox, 2012; Valenzuela et al., 2017), including informal gold miners. Nevertheless, while cooperation in the newsroom is promising to influence everyday gold mining operations, other stakeholders such as NGOs are also required for collaboration with the media.

MEDIA-NGOS COLLABORATION

In addition to cooperation with newsrooms, news agencies should promote the relationship with NGOs. The NGO refers to the non-profit, volunteer organization of people with a state, national or foreign set-up, speaking and working on civic issues (Pezzullo & Cox, 2012). In general, the media shape alliances with NGOs and other non-profit groups (Abernathy, 2016; Mohamad Saifudin, 2016; Stonbely, 2017). For example, the media uses a traditional tactic to deal with NGOs to collect knowledge through noble cooperation (Mohamad Saifudin & Heinrichs, 2019). Stonbely (2017) also indicated that non-profit outlets are likely to partake in media cooperation. The studies related this to a rising amount of support earned for joint projects.

Also, there is an exchange of knowledge on environmental relations between environmental non-profit organizations (ENGOs) and the media. There is a symbiotic partnership between the ENGOs and the media in which the former serves as a means of intelligence. In contrast, the latter serves as a forum for expressing informed opinions (Mohamad Saifudin & Heinrichs, 2019). While media and NGOs have varying degrees of diversity, they share similar roles that ensure their beneficial relationship, especially in informing and educating the public on environmental issues and environmental and sustainability research issues (Mohamad Saifudin, 2017, p. 90). The media and NGOs' joint initiative to monitor illicit gold mining should be complemented by the government's intervention and its related agents.

MEDIA-GOVERNMENT COLLABORATION

The government comprises numerous agents, such as local councils, departments, counties, cities, territories, nations and intergovernmental agencies within a community (Pezzullo & Cox, 2012, p. 45). The media has a vast number of collaborators to select from within the government for cooperation. In turn, for informal gold miners, government grants would ideally make it possible to get more chances to be heard via the media (Pezzullo and Cox, 2012, p. 45). In Nigeria, many state governments (such as Zamfara and Sokoto) have an environmental body responsible for tracking government and citizens' environmental effects.



Inside each of these organizations, there are various workers in charge of managing and coordinating environmental issues with which the media may link.

For example, a study of a collaborative project called One River (a two-year collective storytelling project in Duluth, Minnesota) showed that cooperation contributed to a closer partnership between government and non-governmental groups and the media (Moore & Hatcher, 2018). The partners explored anecdotes about how the project merged, apparently warring elected leaders and NGOs to hear from each other about experiences told by local community members.

Subsequently, the government can use the media to communicate ASGM government policy on legalization, infringement penalties, health and safety information, training on the best available market, and new gold mining techniques (Nigerian Minerals and Mining Act 2007). The information given should be sufficient for the perception and comprehension of gold miners and their families. However, the media and the government are frequently accused of representing informal gold miners



MEDIA AND COMMUNITY COLLABORATION

Communities served by city officials should be part of practical media cooperation. According to the Pew Research Center (2014), media engagement with the group has resulted in more excellent and broader future news coverage and access to information on ASGM events impacting public health, rural growth, and the community's climate. There are fresh perspectives into the engagement and construction of the people, confidence and new reporting methods. Collaboration between journalism and scientists has pursued a new approach to environmental communication in a study by Nettlefold and Pecl on the climate change topic and the threats it brings to local populations, which leads to finding opportunities to optimize journalistic tools for the good of the local community in particular and the world as a whole (2020). Identifying neighborhood problems and media cooperation are two separate issues; however, any effort at both is effectively a step forward towards seeking a solution to the informal gold mining crisis. This effort is corroborated by Hatcher and Thayer (2017) that cooperation between the media and the population, who are partners in a given topic, enables the community to focus on their own experience to recognize issues and move towards their solutions.

In addition to defining the issue, the government and the media are searching for "community money" and "spiral upward" alternatives (Emery & Flora, 2006 p. 1). For example, media workers attend a group meeting to hear more about working together (Hatcher & Thayer, 2017) on different issues that are part of the editorial policy of the organizations they serve. As argued in the next pages, these collaboration relationships are of various forms, with difficulties and future frictions, as with any stable connection.

CHALLENGES ON MEDIA COLLABORATION

Challenges were found in the partnership, considering the opportunities for media collaboration. These difficulties emerge from the professional discrepancies between those engaged with or influenced by informal gold mining and its management (Freeman, 1984). In this respect, Ansell and Gash (2008 & 2012) find that "stakeholders will always have an adversarial relationship with each other, but the aim is to turn adversarial relationships into more cooperative ones" (2008, p. 547). Collaborative problems emerge in rivalry, distrust, skepticism of legitimacy and cultural gaps between collaborating partners (Ansell & Gash, 2008).

Second, problems have been established in the complexity of collaborative journalism. The idea of 'currency," scoop,"' breaking news 'and other terminologies instigate media news collectors, authors and editors to imagine them as journalists firmly hold rivals. This culture breeds rivalry that influences the cooperation of the media. With the press, the best is to be the first, and as confirmed in the Hatcher & Thayer (2017) report, this stimulates the competitive cells in the nerve of media partnership journalists. As developed by academics, the definition of rivalry is rooted in journalists who find it impossible for journalists to collaborate with others (Hatcher & Thayer, 2017).

Another topic of concern for journalists is confidence and suspicion in partnership, one of the most critical social capital theory (Bourdieu, 2011). There is a long-standing mistrust



between newspaper and broadcast media workers, with broadcast journalists possessing preconceived derogatory notions about newspaper journalists (Hatcher & Thayer, 2017; Moore & Hatcher, 2018). Mistrust indicates that broadcast journalists feel more attentive to images than to substance relative to print/newspaper journalists who are perceived as laggards behind contemporary technical problems by broadcast journalists.

As a fundamental property of media practice, prior joint surveys have described individual journalists who have articulated concerns about endorsing news to their readers, listeners or audiences that the journalists have not validated. Journalists believe unverified reports from official outlets to be less reliable (Hatcher & Thayer, 2017), which can influence their actions towards collaboration; however, they neglect the fact that crediting their media may be helpful.

Second, the disparity of priorities is another difficulty in media cooperation. For, e.g., media is a more or less business-oriented partner, while NGO is also a non-business-oriented partner (Mohamad Saifudin, 2017, p. 90; Waisbord, 2011, p. 151). Some academics have also argued that the media and NGOs do not share a common ground (Wondolleck & Yaffee, 2000). There is a difference in the priorities among collaborative stakeholders (Huxham & Vangen, 2014, p. 79). Recent research has also established gaps in professionalism and reasoning in their approaches to environmental problems (Mohamad Saifudin & Heinrichs, 2019; Waisbord, 2011) and differences in regulatory mechanisms (Frangonikolopoulos, 2014, p. 616). Similarly, other reports pointed to "noise" resulting from gaps of competence (Wondolleck & Yaffee, 2000, p. 60) and other topics of interest in cooperation between the media and NGOs, in particular, and other organizations in general. However, given the existing differences, the NGOs and media collaborated on environmental sustainability communication in Malaysia (Mohamad Saifudin, 2017, pp. 98-99).

Third, the media played a part in developing and unmaking community leaders by spotlighting them in the field of social dialogue (Baker, 1972). However, it is essential to remember that community leaders play the same position as the media, where community leaders mediate to address competing problems and influence their neighborhoods' agenda (Ansell & Gash, 2008, pp. 554-5). Thus if city officials share a position close to that of the media, the case for cooperation will duplicate work. This duplication can be used as a reinforcement focused on various scholars (Stonbely, 2017). However, the study found a weak link between the media and the school-community relationship in Zamfara (Bakwai and Abubakar, 2013).

Similarly, with the development of a low media-community partnership, scholars have articulated the importance of media-community cooperation that spreads to classrooms, departments, and journalism and communication studies. This initiative is intended to create a sense of media collaboration in environmental-related fields in the next generation of school journalists (Downie & Schudson, 2009, p. 60-77; Chavez et al., 2018, p. 42; Mohamad Saifudin, 2017, p. 99).

Finally, Mexico's conventional media-government relationship is, at best, lopsided by the reporting of soft and useless environmental news by government departments (Chavez et al., 2018, p. 42). The scholar argued that environmental news stories should be investigative



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and objective. Government-media mutual interference can, on certain occasions, act only to discourage and, if it is followed by the procurement of goods and services (Wakefield et al. 2010, p. 11), be the primary responsibility of the government. However, some researchers argued that not all problems could be avoided by teamwork (Wondolleck & Yaffee, 2000, p. 48). However, it should be remembered that monitoring one-off and seasonal behaviour, such as informal gold mining, involves a variety of collaborative, proactive interventions in the media (Wakefield et al., 2010, p. 11), which are briefed a priori.



CONCLUSION AND RECOMMENDATIONS

This paper provided concerns about the role of environmental communication and media cooperation in regulating informal mining practices. Cases of illegal gold mining are growing internationally, with the risk of lead contamination happening again in Zamfara and other informal mines. The media's position alone is restricted in this respect, hence the need for collaboration with other stakeholders and the media.

In conclusion, the media should provide details on gold mining benefits by impartial reporting on informal ASGM. The media discussion of ASGM activities is currently skewed because it focuses extensively on gold mining's political and negative realities rather than the positive consequences of ASGM operations. The media should also complement the government's efforts by raising awareness of gold mining policies, informality and other vices induced by informal mining. Again, the media should stress conflict settlement, productive contact, danger, and risk communication among informal gold miners.

Governments, NGOs, donor agencies and large-scale miners have been finding ways to reduce the effect of informal gold mining activities. Efforts such as livelihood alternative programmes, diversion of informal ASGM from mining have been applied in several African countries with less desirable results. However, with all these initiatives, informal gold mining still thrives with its impacts on society's health, environment and economy. Therefore, media collaboration remains an inevitably immediate available alternative in controlling informal gold mining.

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