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"Externality" of Fulani-Farmer Conflict in Ghana: A Critical Assessment of Existing Structures.

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Abstract

In the event where social marginal cost becomes greater than private marginal cost during production, social inefficiency (negative externality), amounting to both physical and non-physical costs occurs. This has become of the Fulani herdsmen in Northern Ghana, as farmers and members of the community incur a social cost from the pastoral activities of these herdsmen. Pastoralism and crop farming are ventures long established in Ghana and the share of common-pool resources is the ties that bind these two ventures. Conflict resulting from the share of common-pool resources between the Fulani herdsmen and farmers always leave devastating effects with at least a tripartite base of causes. This paper assessed all the existing structures of Fulani-farmer conflict in Ghana with a case study on the Gushiegu district and advocates for the re-consideration of property rights within the district for sustainable environment and development. The objective is to discuss the international economic, political, and cultural implications of these conflicts for

peacebuilding and to establish lasting resolution strategies among Fulani herdsmen and farmers for sustainable development.

Keywords: Common pool resources; Conflict; Environment; Fulani; Farmer; Negative externality

1 Introduction

Conflict resulting from the sharing of environmental resources is not a recent phenomenon in Ghana as there are a variety and sufficient amount of these resources with a high degree of importance. Taking gold, for example, Ghana earns a huge proportion of its foreign exchange from gold exports due to mineral industrialization, and mining contributes significantly to the gross domestic product of the country (Buaben 2012). Inasmuch as environmental resources generate government revenue, create jobs and other benefits, important characteristics such as utility, restricted supply and potential for depletion needs to be considered. The total measure of satisfaction received from the use of goods and services refers to *utility*. Natural or environmental resource depletion is of concern to sustainable development as it can degrade current state of environments and likewise its limited availability (Salvati and Marco, 2008). These characteristics of environmental resources underline the struggle for the maximum benefit of resources, hence the conflicts and potential of affecting the demands of future generations (Schilling and Chiang2011).

A fast-developing environmental crisis that has risen to prominence due to its devastating effect within the agricultural sector is the Fulani herdsmen-farmer conflict. Although this environmental problem is widespread within West Africa, Ghana has begun giving a lot of attention to the matter due to the multi-faceted nature of the causal factors. Agriculture is one of the main economic sectors of Ghana, employing 53.6 per cent of total labor in 2013, formally and informally more than half of the population and accounting for nearly half of GDP and export earnings (Clark 1994). Flowing across the country in eastern-western bands, dry savannah to wet forest zones, a range of crops are grown within these different climatic areas. Ghana's economy is focused on crops like yams, rice, cocoa, oil palms, cola nuts and timber (FAO 2016).

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Within the northern belt, the dominant form of agriculture is crop farming, such as yam, millet, sorghum and rearing of livestock. Ethnicity, ambiguous property rights, weak immigration laws, and policies have resulted in the influx of migrants to share in the limited resources of the area. An example is the Economic Community of West Africa States (ECOWAS) policy on migration which promotes free movement of people and goods within the ECOWAS community. This means nationals of any of the member countries are permitted to cross each other's borders and reside for a maximum of 90 days without a visa. Some people do extend the 90 days to illegally and permanently live and work in Ghana. Add to that Armah et al.'s 2014 assertion that the differences between farmers and herders in cultural values and the acceptance of modern and traditional laws exacerbate conflict. As the share of land, pasture, crop residues, livestock passages and water points between herdsmen and farmers, caused by population growth, migration and land degradation further escalates the conflict. The physical manifestation of the conflicts is the negative externalities incurred by farmers and community members (Armah et al. 2014). This paper sought to understand how the factors in the conflict system are interrelated giving rise to recurrent patterns of conflict, and at the same time, the externality of the Fulani-farmer conflict with current policy intervention.

1.1 Fulani-Farmer Conflict

In contextualizing Fulani herdsmen-farmer conflict, the Fulani's can be described as an ethnic group who are mostly shepherds and cattle herders located within the Northern part of Ghana and other West African countries. The Fulani are largely rural or pastoral, and they migrate from one area to another. However, crop farming is a business in which an Agri-Entrepreneur engages in crop production on a commercial scale. Originally, crop farming was usually only a small but essential part of the overall yield of a farm, whereas today, especially in developed countries, almost all crops are grown mainly for income.

The use of land for agricultural purposes is a fundamental practice in many parts of Africa. In Ghana, close to 80% of the land is kept under customary tenure regimes, since customary rules apply in both urban and rural settings, and the State officially has access to

20% of the land (Landlinks 2013). The main custodians of customary lands are chiefs and tribe leaders who oversee the use of it for purposes such as farming. This means of subsistence remains central to the economic survival of humanity, especially in Africa. Most communities in Africa have unequal access to land and land-use laws, leading to a fierce antagonism amidst non-agricultural user groups and their agricultural counterparts, and also among various agricultural user groups. Nomadic pastoralists and sedentary farmers are the two main classes of land-users for agricultural purposes who, through the demand to share resources, struggle with each other (Adisa 2012). The human security of these environmentally-conflicted countries continues to acquire national, religious and political form and consequently has a significant implication on development (Nwangwu and Enyiazu 2019). Fulani-farmer conflict or, in other words, herdsmen-farmer conflicts cannot be allowed to continue due to the adverse effect it brings on the community. Herdsmen–farmer disputes typically lead to more deadly group clashes, seriously affecting villages with associated loss of life and properties. A vivid example is at the beginning of 2018, when more than 76 people were killed in one village in Benue State, Nigeria, and, shortly afterwards, another 50 villages were burned in a reprisal attack, resulting in further loss of lives and property in retaliation for the first attack in the same Benue State (Doherty-Odueko 2019). It is therefore prudent for an effective implementation of policies that will ensure an effective measure in curtailing the externality resulting from the use or share of common pool resources.

1.2 Externality and Common pool resources

There are times where an individual or groups of people suffer consequences or enjoy benefits from a business establishment for which they are not part. Buchanan and Craig (1962) consider externality as the cost or benefit impacting a third party who has not opted to incur the cost or benefit (Buchanan and Craig1962). In situations of externality, the total cost or profit to society is defined as the amount of the imputed monetary value of the benefits and costs to all concerned parties (Arrow1969). This cost is borne by the people within a community, consumers, or an entire nation and poorly-defined property rights is one of the leading sources of externalities. The undefined ownership and use of

environmental resources may generate a situation when certain business participants start consuming or generating more when an unknown party covers or earns a portion of the expense or profit. In many parts of the world, examples of environmental resources with loosely-defined property rights include air, water and wildlife. Externalities generally are categorized into two, namely positive and negative externalities. On one hand, a positive externality, also known as an external benefit or in some cases, external economy, or beneficial externality, is the positive effect an activity inflicts on an extraneous third party (Varian 2010). Ultimately any economic activity which is benefited or experienced by an unrelated third-party is deemed to have a positive externality. On the other hand, if the output of a business affects the well-being of those who are not direct beneficiaries of the company, then such a condition may be considered a negative externality. Many negative externalities, including the various kinds of environmental pollution, are particularly dangerous because of their major adverse effects.

Common pool resources consist of a "core resource like water or fish, that measures the stock variable by providing a finite amount of extractable fringe units describing the flow variable. While a core resource must be secured so that it can be continuously used, the fringe units may be harvested or consumed" (Ostrom 1990). Environmental economics, as a discipline, interprets natural resources according to expectations regarding the protection of these resources in ways such as clearly identifying the sustainability of the resources. The definition of market failure with types such as include externalities, non-exclusiveness and non-rivalry are fundamental to environmental economics (Anderson 2019).

2 Materials and method

2.1 Demographic, cultural, and economic characteristics of the study area.

The Gushiegu district is situated about 105 kilometers northeast of Tamale, capital of Northern Region, Ghana. Gushiegu Township is the administrative center of the Gushiegu District, carved out of the former district of Eastern Dagomba. The district is one of 26 districts in the northern region and has borders with the districts of East Mamprusi

and Bunkpurugu / yunyoo in the north, Yendi in the south, Saboba and Chereponi in the east and Karaga in the west (Gushiegu District Assembly 2006). The total population of the district, as at the 2010 population and housing census, was 111,259 of which males constituted 48.7 percent while females were 51.3%. A little above three-quarters (76.0%) of the population in the district live in rural areas, and the remaining are in the urban areas. The working-age population (15-64 years) have more females (53.1%) than males (46.9 %) (Ghana Statistical Service 2014). The district is populated by six major ethnic groups: Dagoombas, Konkombas, Fulanis, Chacoshies, Bimobas, and Nanumbas (Gushiegu District Assembly 2006).

The 2010 population and housing census again showed evidence of migration to the district as the migrant population in the district is 14,966. The majority of people who migrated to the district have been residing there for a period between 1 to 4 years (26.5%). On the element of livelihood, about 88 percent of workers in the District are engaged as Skilled Agriculture, Forestry, and Fishery Workers. This is followed by Service and Sales Workers (4.4%) while Craft and Related Trade Workers are approximately three percent (Ghana Statistical Service2014). Agriculture activity commonly practiced is mainly crop farming and livestock rearing. Crop farming in urban and rural areas have proportions exceeding 90 percent of agricultural households. Animal-rearing is the second most important agricultural activity after crop farming. Among the ruminants, the top three are 20.2 percent of cattle with 15.3 percent of keepers, 19.4 percent of goat with 26 percent of keepers, and 18.3 percent of sheep with 22.5 percent of keepers. The average animal per keeper for cattle, goat, and sheep is 25, 14, and 15 respectively (Ghana Statistical Service 2014). This emphasizes the popularity of farming and livestock rearing within the district.

2.2 Case study design

A case study is a detailed analysis of a specific event, rather than a broad statistical survey. It is used as a tool to construct a very large field of study into one easily researchable subject and useful in evaluating whether the concepts and models of science function in the real world (Shuttleworth 2008). Case study research can mean single and

multiple case studies to include quantitative evidence that relies on numerous sources of data and aid from the theoretical proposals developed beforehand (Yin 2013). Case study research design is again useful in testing whether scientific theories and models work in the real world as in the case of how policies are working to resolve Fulani-farmer conflicts. The case study design is appropriate for this paper as it seeks to understand the reasons behind the externality of the use of the pool resources, which creates conflict within Ghana's Gushiegu district.

3 Results

3.1 Case study

The Konkomba-Fulani conflict was heightened in 2011 when two ethnic groups within the district clashed. The Konkombas are known farmers and the Fulanis are known herdsmen. Olaniyan (2015) recorded how on December 7, 2011, Konkomba farmers carried out a night raid in Damdaboli, Zamashigu, Batiga, and Naboya farming communities in the Gushiegu district of northern Ghana. By daybreak, 13 Fulani pastoralists had been killed; their houses burned, and their cattle rustled, as spoils of war. They were rendered homeless and had to be accommodated at the district headquarters for more than 3 months (Olaniyan 2015; Akosua-Dosu 2011; Zoure 2011). The twist to the problem is the fact that it had an international dimension as some of the affected herders were citizens of Burkina Faso. In conjunction with the above, the Konkomba ethnic group has a history of violent conflicts with neighboring groups. It began with an attack on the Dagomba village of Jagbel in 1940, in what is known as “cow war,” which resulted in the death of the chief, members of his family, as well as the burning of the village (Johnson2007). The Konkombas has been described as an acephalous group with no history of empire building (Oelbaum 2010). They have, however, had a long history of habitation at their present location in the Gushiegu district, unlike the Fulani ethnic group who are equally found in large numbers in some West African countries such as Togo, a product of colonial policy. A public referendum conducted in 1956 effectively made the British part of Togoland become part of the Northern Region of Britain’s Gold Coast, now Ghana, colony,

therefore it is the reason for the Fulani being found within the Northern Region of Ghana (Johnson 2007).

3.2 Policy implication- Free movement of persons within ECOWAS member states.

The concept of migration affects society in diverse ways as people or individuals move from one place to another in order to settle permanently or temporarily in a new location (World Migration Report 2020). Global figures suggest that 3% of the world's populations are migrants in search of work or economic opportunities or to escape conflict, terrorism, or human rights violations (United Nations 2006). The main reason is that the era of growing and intensive economic, political, and socio-cultural interdependence among states has been on the increase. The United Nations estimates once again that approximately 7 million of the 191 million refugees spread across the globe come from the sub-region of West Africa (United Nations 2006). In May 1979, the free movement of persons in ECOWAS member states began, with the first protocol on free movement of persons, residence and establishment adopted (Ecowas Protocol1979).

The provisions of the protocol state that citizens of ECOWAS have the right to join, live and develop economic activities in the territory of other Member States and proposed a five-year, three-step roadmap to achieve freedom of movement after a total of fifteen years. The first phase concerns the right of entry without visa, the second phase deals with the right of citizenship, and the third phase concerns the right of establishment in another Member State. The first phase of the protocol has been fully implemented, with the second phase being the right of residency, also implemented given that citizens can access an ECOWAS residence card (or permit) in fellow member states. The third phase, the right of establishment, is still under implementation in most member states (Adepoju et al. 2010).

Given the degree of progress achieved in the ECOWAS free movement protocol, the delay in implementing trade liberalization policies, such as reducing customs duties, has helped slow down attempts to incorporate and realize the free movement of citizens. Bolarinwa (2015) specifies that multiple memberships as ascribed of some member states who have joined other regional groups with overlapping interests are the reasons for the

inability to ensure full implementation of the protocol which poses serious problems when coordinating policies (Bolarinwa 2015).For example, the Nigerian Government in 1983 and 1985, respectively, abrogated Articles 4 and 27 of the Protocol and expelled around 1.5 million non-residents who were mainly Ghanaians (Adepoju and Wiel2007). Also, weak border control system within member countries encourages illegal entrance and has been one of the major causes of conflict among citizens and foreigners of the ECOWAS members. The manifestation of the unmatured implementation of the policies across several countries in West Africa is one of the major causes of the Fulani-farmer conflict experienced in Ghana.

4. Discussion

4.1 Negative Externality on farmers and community members

In the first place, the type of externality that sets in from the conflicts between the Fulani cattle herders and farmers within the Gushiegu district is a negative externality. The activities of the Fulani bring an unwanted, or external, cost to the farmers and community members. These negatives are seen in three broad areas: namely, destabilization of crop production, high rates of poverty and starvation, general loss of lives and properties, and polluted water bodies. The conflict identified between the Fulani herdsmen and farmers can be termed to be a low-intensity conflict. Conflicts of low intensity involve periods where aggression or disagreement exists at a more localized level and at a lower rate, typically less than 1,000 deaths in combat versus a civil war of full scale (Öberg, Möller and Wallensteen2009). The following are known negative externalities of the conflict.

First, the destabilization of crop production is a major effect or expense borne by farmers and community members as a result of the destruction by cattle, belonging to the Fulani, of crops and bodies of water. The reprisal attack by farmers leads to a non-peaceful coexistence between these two groups thereby causing a loss in food production within the district. The World Health Organization (WHO), for instance, values food security around the world and considers three pillars as a determinant of food security: food availability, food access, and food use & misuse (WHO 2013). Food insecurity affects the lives of

millions of people across the world and is increasingly concentrated in conflict-affected regions just like the Gushiegu district. All 19 countries the FAO currently classifies as being in a protracted food crisis are affected by conflict and violence (Martin-Shields and Stojetz 2018). Keeping an eye on food insecurity in conflict-affected areas to comprehend the connection between food insecurity and violent conflict is important in educating state, national, foreign practitioners and policy makers about evidence-based interventions.

Second, a negative form of externality is the high rate of poverty and hunger within the district caused by the conflict between Fulani herdsmen and farmers. Poverty and hunger go hand-in-hand with food insecurity; not everyone living in poverty faces chronic hunger, but almost everyone facing chronic hunger still lives in poverty (Hunger Project 2019). Millions suffer with hunger and malnutrition because they literally can't afford to buy enough food, they can't afford nutritious food, or they can't afford the resources they need to produce sufficiently healthy food for themselves. Hunger can be seen as an extreme poverty dimension, which is also considered the most serious and important form of poverty. The insecurity within the district, due to the conflict between farmers and herdsmen who are major elements of farming, has led to low production rates. As a consequence, Amanor-Boadu et al. (2013) observed that the districts in the Northern Region of Ghana with the highest poverty prevalence rates are in the northeastern parts of the region while those with the lowest are found in the southwestern parts. For example, Gushiegu district, Mamprusi East district and BunkpuruguYonyo in the northeastern part of the region has the highest poverty prevalence rates (Amanor-Boadu et al. 2013). Other factors, such as lower literacy rates, contributes to the poverty suffered in the region. The inability of both farmers and herdsmen to produce throughout the year, due to insecurity, contributes more however to the poverty in the district.

Third, one externality suffered by the community due to the Fulani-farmer conflict is the general loss of lives and property. The case study for this paper in which 13 lives were lost is just one out of several cases of lives and property being destroyed. Properties in the form of houses, farms, bicycles, and motorbikes are destroyed during such conflicts. There had been bottled up feelings of frustration among the Konkomba over the time

against the Fulani. These feelings border on allegations of raping, armed robbery, and destruction of farm crops, all allegedly attributed to the Fulani. Also, the issue of destruction of farms by cattle poses a major source of anger and frustration on the part of the Konkomba group (Olaniyan 2015). As argued, heretofore, the major preoccupation of the Konkomba is yam cultivation; and the herders were known to release their cattle to eat up and destroy yam farms, leading to loss of yield with serious consequences on accruable income. There is little or no compensation given to the farmers for their crops being destroyed, and this leads to reprisal attack on the herdsmen in the form of killing of the cattle.

Fourth, pollution of water bodies in the district has become both a cause and an indirect effect of the Fulani-farmer conflict. Cattle walk through water bodies and in the process rend many water sources not fit for consumption. Residents are exposed to all forms of contamination, and ineffective management of resources has made water bodies in the district a resource shared at the same time by humans and animals. In Ghana, around 60 percent of water bodies are contaminated and most are in a severe situation (Ampomah2017). The erroneous management of agricultural waste (manure) is responsible for contamination of the soil and groundwater. Animal production systems may result in direct surface or groundwater discharge, run off and/or flow of pollutants causing water pollution. Pollutants are sediments, minerals, chemicals, organic matter, salts and micro-organisms that can kill fish, cause odors, spread infectious bacteria and impede water-related activities. Water resources hold tremendous economic potential for forestry, tourism, irrigation, transportation and industry (Nsubuga and Namutebi 2014). This has been the reality on the ground as water bodies within the district are polluted from cattle droppings and from the cattle sharing drinking water with humans.

5 Recommendations

5.1 Proper definition of property rights

According to the Ministry of Food and Agriculture, within the Gushiegu district, there is communal ownership of land, and members of a family have a free and inalienable claim

to family land. The acquisition of land for farming by non-family members is subject to respect for tradition and payment of homage to the head of family or clan. No financial or in-kind charges are levied directly but it is often expected that a quantity of harvested produce is given to the landlord. The land tenure arrangement has a positive enabling environment for agricultural investment in the district. The fact that procedures for land acquisition are not cumbersome and that it is more or less freehold makes investment in the agricultural sector in the district very attractive. Despite the importance of communal ownership of land within the district, it is time for a re-look into the venture.

As defined by Bromley (1989) common property is owned by an identified group of people, invested with the right to exclude non-owners, and the duty of maintaining the property through constraints placed on use. There is the need or advocacy to convert the communal property rights into private property or the tightening of boundaries and rules concerning communal property rights to prevent encroachment and the clear protection of property. Movik (1994) notes that much of research on common property systems have centered on identifying the conditions under which such systems thrive and has consequently given rise to two major lines of arguments. Two conditions must be fulfilled for common property management systems to function – one is a clear demarcation of physical boundaries of resources, and the other is the presence of unambiguous social boundaries, i.e., group membership must be in place for common property arrangements to work (Movik 1994).

These two conditions are absent within the Gushiegu district because there is no proper physical demarcation of resources such as water bodies and farmlands. There is the existence of a multi-ethnic groups' composition within the district, including Dagoombas, Konkombas, Fulanis, Chacoshies, Bimobas, and Nanumbas. Inter-tribal marriages among the ethnic groups are allowed so, hence, the ambiguity in the definition of membership of the group. Private property of the lands within the district will best suit the situation of the negative externality. Private property – *res private* – assigns property to identifiable individuals, which guarantees them the control of access and the rights to socially acceptable use (Hanna and Munasinghe 1995). Harold Demsetz in 1967 wrote a paper

entitled 'Towards a Theory of Property Rights' where he argued forcefully that private property rights were superior to communal property rights because private property rights internalize externalities. Taking land title as an example, private ownership would internalize many of the externalities that come with community ownership. As an individual proprietor, one is entitled to exclude other possible users and the gains of a well-managed property could be achieved (Demsetz 1967). An accompanying argument is that private ownership greatly reduces the costs of negotiating remaining externalities – in other words, the expense of resolving contracts is that within the domain of the private property regime.

The main disadvantage of private ownership is the fact that it breeds inequality. Inequality here means the system creating a wide gap between the haves and have-nots and in the process, giving power to direct the lives of those who have no property. This goes a long way to serve as the basis of capitalism and the critics outlined by Karl Max in the Communist Manifesto. Despite the disadvantage of private property ownership and when compared to communal ownership of property, in context of the share of environmental resources, the former is suitable than the latter. Farmers with clear demarcation and ownership of land within the district will be able to effectively protect the land and seek redress from the court and authorities in the event of encroachment or destruction of crops from the Fulani herdsmen.

5.2 Implementation of compensation strategy

There should be the enactment and enforcement of the payment of compensation in the event where cattle belonging to the Fulani destroy farms and water bodies. Compensation for environmental damages is a phenomenon well-established in international standards. Within international and comparative environmental law, the notion of damage to the environment is gaining growing attention as liability and compensation laws come into the picture where administrative regulations have proven unsuccessful in preventing harm. If harm has occurred, attention is based on compensation, *inter alia* in the form of environmental re-establishment or, where this is not practicable or

is not economically feasible, by making financial compensation (Wetterstein1997). For instance, after a pollution incident, compensations could be in the form of restocking the waters with young fish, replanting new flora, and cleaning the banks. The Fulani are known polluters of water bodies and yet there are allegations of non-payment of compensation for pollution and destruction of people's farms.

The Fulani say none of their counterparts deliberately release cattle to destroy farms and that there could be some instances where cattle could stray and eat crops and that each time it happens, they always pay compensation to the farmers. There should a law specifically set up to support the enforcement of the compensation strategy to end the conflict between farmers and Fulani.

5.3 Establishment of grazing reserve: a possible solution to end the conflict

The demarcation of cattle routes and grazing reserves has been a desperate call from the Ghana National Association of Cattle Farmers (GNACAF), so that, they say, the incessant conflicts between farmers and herdsmen could be over. To come out with lasting solutions to the conflict, the government must set up public policy experts to find ways to solve the malingering crisis and, also, for the government to create a permanent settlement by establishing grazing reserves to ensure a regulated form of movement of the cattle and herdsmen. Pastoralism as a means of subsistence is under growing pressure in Africa, due to changes in social, cultural, political and environmental conditions. Before the 1950s, there was a symbiotic relationship between pastoralists, farmers and their climate with herders performing transhumance seasonal migrations (Ducrotoy et al. 2016).

The dry season compels pastoralists to move to the southern parts of Guinea's savannah zone, where there is pasture and lower crop density. Such areas are facing strong challenges from African animal try panosomias is, spread by tsetse flies during the wet season, while pastoralists will move to farmland in the Savannah region of northern Sudan and supply dairy products to the local farming community. Reciprocally, there was the provision of grains to the pastoralists by the agricultural community, and after the harvest, cattle were allowed to graze on crop residues in fields leaving valuable manure behind. The

creation of grazing reserves is a viable solution. It means shifting from the old system of animal husbandry to a modern method. This would overcome the problem of unavailability of cattle market and diseases control offices and at the same time ensuring the production of meat and cattle products throughout the year. Establishing grazing resources is a sure way to end the conflict.

6 Conclusions

For the prevention of conflict, there should be a rigorous establishment of a legislative instrument to enforce the prevention of the negative externality on community members. Finding a lasting solution to Fulani-farmer conflict in Ghana is a long shot at ensuring peaceful co-existence, prevention of hunger and poverty, and ensuring the production of food all year round. The conversion of the communal land ownership within the district to private-property ownership will ensure full security of properties and allow for the proper sale or rent of the property to a person. Failure of government to establish grazing reserves laws which among other things allows for the demarcation of the land for growing of pastures for grazing and passage routes for animals will do a lot of good. Further research is needed to be conducted on the causes and consequences of the conflict, and a sound conflict resolution mechanism is needed from the government which may include intensive research as the way forward to resolve the conflict by government policy-makers, and leaders of the parties involved in the conflict to come out with a policy that will end the conflict for the lasting peace of the country.

Disclosure statement

The authors declare no conflict of interest.

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