

# Impact of COVID-19 Policy Measures on Food Security Among Urban Residents in Blantyre City, Malawi

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## Research Article

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# Abstract

## Background

Malawi, a vulnerable country in Sub Saharan Africa (SSA) is at the helm of experiencing food insecurity amidst COVID-19 as the vast majority survives on the hand-to-mouth economy. However, knowledge about how COVID-19 policy measures lead to food insecurity among the urban residents in Malawi is scanty. Understanding this link is crucial for designing the interventions that can help reduce the risk of being food insecure while containing further spread of the virus. Using Bronfenbrenner's ecological theory as a conceptual framework, we explore the impact of COVID-19 policy measures on food security experienced by Blantyre residents in Malawi. We interviewed fifteen participants composed of private secondary school teachers and informal workers to understand their experiences of food insecurity linked to COVID-19 policy measures in place by the Malawi government.

## Results

Our results show that participants face difficulties to access adequate food and have also changed their eating habits by skipping meals in some days due to loss of jobs, underpayment as well as business disruption.

## Conclusion

Based on the findings, we argue that the COVID-19 policies have aggravated severe challenges among urban residents to access adequate food rendering them food insecure. To ensure sustained livelihood, we suggest the Malawi government should design immediate interventions such as relief fund packages targeting the urban poor to rescue them from facing acute food shortages while containing the pandemic.

## Introduction

As the world continues battling with COVID-19, which has seriously disrupted the global economy as well as the food supply chain, several countries are at risk of being food insecure (1). Food insecurity is defined as inability or deficiencies to access adequate quantity, and nutritious safe food as well as feeling not being satisfied with the food consumed (2). A recent report by the World Food Program shows that in the year 2020, nearly 137 million people worldwide faced acute food shortages, and this figure is significantly higher compared to the initial estimates before the inception of COVID-19 (3). The United Nations Sustainable Development Goals set a very ambitious goal—to end hunger by 2030, unfortunately, the pandemic has disrupted this goal as over 150 million people globally today are stuck with extreme poverty (4). Scientists predicted that poverty would persist until 2050 as millions of households in Sub-Saharan African countries such as Ghana, Senegal, and Zimbabwe are food insecure (4). Given that the

geography of SSA is well known for its multiple problems such as extreme poverty, hunger, water insecurity as well as disease burdens, there is no doubt that COVID-19 has posed a serious socio-economic dilemma, which has disproportionately affected food security.

Malawi, a country in SSA remains the poorest in the world with over half of its population living below the poverty line and almost a quarter are tramped into extremely poverty (5). There has been an increased level of poverty exacerbated by the worst floods and drought of 2015 and 2016 which resulted in widespread food insecurity (5). The perception of Food security in Malawi generally centers around maize production, distribution, and utilization. While Malawi produces a variety of food crops, maize accounts for 90% of the produce. It is the staple food in the country, consumed by almost the entire population. Other crops such as rice and potatoes only supplement maize consumption. In Malawi's framework, the availability of and access to sufficient maize defines food security(6). Given the pre-existing challenges, COVID-19 accelerates the burden of urban residents living on a hand to mouth economy. As of January 2021, out of 21, 660 Covid-19 confirmed cases, 13, 646 are active cases, and nearly 555 people have died, including the demise of the top Malawi's government official including the ministers (7). With alarming increase of the cases and associated deaths, the government gazetted strong restrictive measures such as reducing the number of minibuses and taxi passengers and closing bars and marketplaces at eight o'clock in the evening time (7). These measures have been deemed to be extremely harsh by the urban dwellers as they pose threat to their livelihoods.

Understanding the nexus between COVID-19 measures and food security in the Malawian context is crucial for effective implementation of interventions that can help reduce the risk of being food insecure while preventing further spread of the virus. Food insecurity is linked to child stunting and this is a big problem in Malawi as evidenced in the central region (8). However, there is a gap in knowledge of how COVID-19 policy measures have led to urban food insecurity among urban residents in Malawi. Our study contributes to the existing literature by examining the emerging geographies of household food insecurity linked to the newly COVID-19 policy measures in Malawi's secondary city of Blantyre.

## **Conceptual framework**

We used Urie Bronfenbrenner's ecological theory to better understand the determinants of household food insecurity amidst COVID-19 among informal workers in Blantyre, Malawi. Bronfenbrenner's ecological theory unfolds the interconnectedness between the environment and the people it nurtures. Thus, external factors can influence the individual's capacity to do certain actions, and at the same time, the environment can be altered by the individual's activities (9). External factors include the interpersonal, societal, community, organizational, State, and or National levels (9). These are nested within the broader context of culture and policies that reinforce specific values and behaviors. Studies have used ecological theory to understand how food pantries are managed and its relationship to food insecurity in the rural communities of Mississippi, USA (9). By using ecological approach, we examine how the societal systems and structures such as government policies on COVID-19 have rendered household food

insecure by influencing changes in their daily meal consumption as well as limiting people's capacity to access basic food and or reducing the availability of food supply.

## **The history of food insecurity in Malawi**

Malawi's economy is entirely agricultural. The country feeds its population with primary produce, grown on the fertile soil with the aid of seasonal rainfall. Changes in the rainfall patterns alternates harvest on the farm, affecting the nation's food security. Historically, Malawi suffered extreme food shortages that eventually led to the most notable famines in living memory. The Nyasaland famine of 1949 severely hit the southern region, extending to the central province (10). It commenced in 1948 and lasted until March 1949. While many factors accounted for the 1949 catastrophe, it was the drought of December 1948 that greatly resulted in famine (10). The country received half rainfall in 1948 and witnessed no rains in the same year, leading to severe droughts. The drought hindered germination and growth of food crops, causing a significant loss in farm produce. Food crop failures downsized the country's food security, making the largest population suffer a severe hunger. The death of people to famine accelerated even when the phenomena ceased. Fortunately, the colonial government, in response, encouraged root cropping to diversify sources of food and reduce dependency on maize products. Such governmental efforts accompanied by labor migrations and consumption of wild plants mitigated the impacts of the Nyasaland famine of 1949.

Malawi at independence in 1964 launched new agricultural policies that intensified food production to ensure national food security. Hastings Kamuzu Banda, the president of the time, subsidized household farming with free inputs such as fertilizers, and seeds. The country in the years between 1960 and 1970 secured enough food for its population from successful farming (11). However, towards the closure of the 1980s and the onset of 1990s, food insecurities resurfaced. The Southern African droughts dropped maize harvest by 50%, limiting the people's access to the food resources. Reduction in maize production impacted on marketing price which doubled in 1992 and 1993, making the poor Malawians suffer extreme hunger.

The Malawi government reduced hunger intensity with the provision of food aid, free maize seeds, and fertilizers as part of the Drought Recovery Inputs Program. Nearly 1.3 million of Malawi's population benefited from this program (11). In 1996, the government also embarked on the Starter Pack Program to ensure food security and alleviate poverty in the country. Through the Starter pack program, the government allocated hybridized maize seeds and legume seeds to household farmers. It was estimated that the country would double maize production and even register extra yields. Nevertheless, such successes in achieving food security lapsed in 2001 with another living memory of famine. Flooding and inadequate rainfalls reduced harvest of maize by 30%, causing food insecurities. The 2002 famine was so devastating, claiming over 1000 lives of the people (10). During all the events of famine and food insecurity in the country, it was mostly one single crop of maize that disappeared.

## **Methods**

## **Study locality**

Malawi is located in southern Africa, bordered by Tanzania to the north, Zambia to the west and Mozambique to the south (Figure. 1). The Malawi National Statistical Report of 2017 shows that there were over 17.6 million people in Malawi. More than half of the country's population is living below the poverty line and almost a quarter is trapped into extreme poverty (12). Malawi has three main secondary cities namely: Mzuzu, Lilongwe, and Blantyre situated in the Northern, Central, and Southern regions, respectively. This study was conducted in Blantyre city, one of the oldest urban centers founded in 1870s by the Scottish missionaries) (13). Blantyre city serves as the second largest commercial city in Malawi with a population of about 1 million people (14). Informal employment forms the main source of income for the vast majority (> 90%) in which most these are engaged in agricultural activities, and others in an unregistered income generating activities (15).

## **Data collection and Analysis**

We recruited a Malawian woman with fluency in both English and Malawi's local language to interview minibus drivers, vendors, private secondary school teachers, and sex workers. The interviewer was trained in qualitative research inquiry, research ethics, and all research protocols regarding the sensitivity of the topic under study in relation to the nature of the participants. A total of fifteen participants were recruited in the study drawn from different localities within the city region. The age ranges of the participants were between 18 and 29. We determined the sample size and the participants based on the principle of maximum variation to collect diverse data (16). Interviews were conducted to capture in-depth information regarding his/her experiences and worries about being food insecure as a result of COVID-19 preventive measures. For each participant, the interview lasted approximately 40–90 minutes. Interviews are usually conducted to a small number or group of people with an aim of capturing individuals' views and understanding about a certain phenomenon (17).

Interview guides containing modified questions adopted from a Household Food Insecurity Access Scale (HFIAS) were sent to our research assistant in Malawi. A consent to participate in the study was obtained from each participant verbally in either English or Chichewa languages. We preserved the names of all participants by using pseudonyms throughout the manuscript. Data analysis involved verbatim transcription of the data from Chichewa into English language. We used hand-coding to analyze the interview transcripts for rigorousness of our qualitative data (18). All authors read the raw data for several times and drew the themes that were significant to address our research questions (19). For the reliability of the data, the codes derived were compared and subsequently organized into categorized and themes. Direct quotations from the respondents were presented narratively in form of stories. All the methods presented in this study were done following the institutional guidelines and regulations as detailed in the ethics approval letter.

## **Research Ethics Review**

Ethics approval to conduct this study was obtained from the University of Livingstonia research ethics committee in Malawi by the third author (protocol number: UNILIA-REC/1/CUP 2/01). We sought written permission from the Blantyre city Assembly. We also obtained written consent from the participants prior to the interviews.

## Results

This section presents the results on how COVID-19 policies have whether aggravated food insecurity or in Malawi's Blantyre city. We carried out the task of interviewing participants, reviewing the findings, and crafting our work under the framework of ecological theory, reflecting on how the changes in the government's policies have concurrently altered food consumption and access. Our results revealed that residents in Blantyre city are facing significant challenges to access adequate nutritious food as a result of the new policy measures in place by the Malawi government in abide to reducing the further spread of the virus. Our findings about the emerging geographies of food access difficulties are categorized into the following themes: people's access to income amidst COVID-19, access to food, and changes in eating habits.

### People's access to income amidst COVID-19

The awareness of the COVID infection has directly lowered people's accessibility to financial resources. Different categories of the people interviewed complained about poor economic performance as a product of the fear for COVID infection. As generally articulated, social gatherings and personal contacts outspread the coronavirus within a split of a second. Such an awareness discouraged people from accessing the sex workers' services. A 31 aged sex worker confirmed the detachment of the existing clients by articulating that:

*The nature of our job puts us and our customers at risk of contracting the virus, and due to this, we have lost several valued and potential customers. (Goweko, Sex worker)*

Losing customers financially cripple sex workers who sorely depend on the provision of services to feed their family. Stories of sex workers resonate with many citizens surviving on undocumented tasks in untamed urbanism. Vendors shed similar fate as buyers of their items unlikely present themselves in crowded towns, fearing COVID 19 contraction. This bears serious consequences on the outcome of business in town. The vendors profit less than usual from the sales, hence discarding their access to financial wealth.

### People's access to food during the COVID-19 pandemic

The measures against a further spread of the COVID 19 suppressed people's accessibility to food. The Malawi government installed preventive measures to keep citizens away from the pandemic. During interviews, participants reported that the government in response to the COVID 19 outbreak officiated a curfew, commencing at 8pm of every single evening This measure required city dwellers to close

businesses and desert the town at the demanded time. However, citizens with total dependence on informal business accumulated more profit during night hours than daytime. In our interviews, sex workers reported to face income depreciation with the installation of the curfew.

*We used to make a lot of money in night clubs and bars just by entertaining or dancing for the clients but now with the government's restrictions, all these entertainment centers are now running for a few hours and it is very hard to make a reasonable amount of money as we used to make before (Chamoka, Sex worker).*

These views were also similar to those expressed by another sex worker who overwhelmingly pointed that:

*We can't find money that could have been used to buy healthy food because our clients are scared to come out of their houses at night. (Hawaya, Sex worker).*

Feeling discontented with this development, sex workers marched in the streets, demanding the government to undo the curfew. Most vendors enrolled in the untamed business also suffered the consequences of preventive measures, alongside sex workers. With the curfew in towns, business remained open only during unprofitable hours and shut down at the time people are available to purchase food items.

Additionally, the people's purchasing power reduced, worsening profitability at the market. The reduction in purchasing power originated from the closure of schools, which downsized income of the teachers by 50 or even 100 %. Private schools entirely survive on tuition fees collected from students. When the government shut down schools to disperse the students away from each other, a collection of schooling fees to pay teachers also shut down. In the end, teachers only walk home with little or nothing, and this hugely impacted food access and consumption. One private school teacher complimented:

*Some of us do not have enough money to buy proper food due to the closure of schools. The owners of the schools argue that they cannot pay us our usual salaries because we are not working as the schools are closed in compliance with the government policies (Mr. Kapadala, Private School Teacher).*

Vendors face similar limitations to access food for their daily survival as stated: ,

*I am not making as much money as I used to make before, and this has resulted in me failing to afford buying enough relish or maize flour that could last me and my family for the whole month." (Mnatharu, Sex worker ).*

## **Changes in eating habits**

Residents in Blantyre city have changed eating patterns just to prolong their survival and reduce sufferings resulting from limited access to food resources. During interviews, participants reported they invented ways of mitigating the effects of food inaccessibility as a result of the pandemic. They opt to eat less than usual. When asked the meaning of this phrase, participants literally referred to skipping one

meal on the daily menu as well as preparing only half of the normal size of the food consumed. In Malawi, people usually follow a meal plan of three patterns that commences with breakfast, lunch and then dinner. However, the coming of the COVID 19 has crippled food accessing power, limiting the quantity and quality of the food available for consumption. In response to this challenge, citizens resonated to skipping meals as a way to extend consumption of the little food available at home. Apart from adjusting to eating only twice a day, they also eat a small-sized portion of the meal. One of the private school teachers enriched our findings by saying these remarks:

*During this time while we are waiting to be called back at work, we have to eat less in order to have little money to buy food in the near future in case you are at home for a longer time without a job. (Mr. Dokiso, Private School teacher)*

Eating less and skipping meals have become the possible strategies of combating the pressure of food inaccessibility and also the normal eating habits during the pandemic. We note that people also normalize eating less nutritious food as part of the food coping strategy during the reign of the pandemic. Food rich in nutrients generally cost higher than less nutritious ones. In Malawi, meat, chicken, fish, and other stuff are more expensive than vegetables, sweet potatoes, cassava, and soya beans. With shortages of impressive income, diversifying food consumption to ensure maximum utilization of nutrients becomes an obstacle. A secondary school teacher reported that:

*I am not earning my full salary and due to this I'm not able to buy different kinds of foodstuffs because the money is not just enough, and things are now expensive. (Asamma, Private school teacher).*

Therefore, people eat what their tender pockets affords, usually cheap, and less nutritious. In accordance with the perspectives of the above teacher, one of the sex workers articulated these words during the interviews:

*"Due to little or no money, I have been finding problems buying and eating healthy food. I mainly resort to anything that is extremely cheap" (Chisomo, sex worker).*

## Discussion

This study employed a purely qualitative inquiry approach by conducting in-depth interviews to explore and better understand how COVID-19 policy measures have impacted on food insecurity among urban residents in Blantyre city, southern Malawi. Our study findings are consistent with recent studies conducted in Nigeria (20) Kenya and Uganda (21), and in Ethiopia's capital city, Addis Ababa (22).

Drawing evidence from Nigeria, many households with low-income status worried about being food insecure as a result of COVID-19 policies such as lockdowns instituted by the Government (20). In accordance with this, one of the critical themes emerged in our study was that participants expressed worry about having no or little access to income and other resources following the COVID 19 preventive measures. Residents engaged in informal activities in the city are unable to work, trade, and do any other



business as usual due to the government's policies such as banning public gatherings, shutting down schools, reducing the number of passengers hiring minibuses, and closing the nightclubs and bars. This has resulted in disruption of business activities and this has potential to increasing their vulnerability to food insecurity among the informal workers as reported in previous study (14). Given that urban life depends on income, lack of financial and other resources has resulted in severe complications for the informal workers to afford buying adequate nutritious food for health as well as deteriorating their livelihoods. Our finding agrees with a study conducted in Ethiopia on COVID-19 and food security, which revealed that market closure, income loss, and increased in food prices during this pandemic period has negatively impacted the general livelihoods of people in the country (22).

Findings of our study show people developing coping strategies to accommodate food consumption and access challenges in the midst of the COVID-19 pandemic. People have altered the normal eating sequences especially those who used to eating three times a day to either two or once per day. The coping strategies also include consumption of less nutritious food. These findings concur with recent studies in Kenya and Uganda on the impact of COVID-19 on food security, revealing that households adjusted their dietary pattern by consuming less diversified food, and reducing the usual amount of the food consumed, and skipping meals (21).

While the coping strategies seemingly contain the challenges of food consumption and access, they have devastating impacts on people's nutritional health. Skipping meals, eating less than the normal size, and consuming less nutritious food can apparently result in malnutrition, which increases risk for illness. A study conducted in Kaplan Harzfield Medical center found that poor dietary intake accounted for the hospitalization of many patients (23). The patients displayed signs of deficiency diseases that negatively impacted their health, leading to the death of 22.9% of them (23). Thus, advancement in such coping strategies puts the lives of the Blantyre residents at high risk of suffering from deficiency diseases, stunted growth, and increased deaths. Our projection aligns with the study on "Early Food Insecurity Impacts of COVID 19" researched in Vermont, United States (24). The study projected increased healthy related diseases if the Vermont population continues consuming poor dietary food as coping strategies. The COVID-19 outbreak, apart from suffocating the public health safety, has also exacerbated food insecurities among the urban dwellers in Blantyre city.

## Conclusion

Our study has demonstrated that food insecurity among the urban residents is worsening in Blantyre city. When the respondents were asked about food having access to adequate food, most of the participants overwhelmingly expressed worry about having no or little money and resources that would enable them to afford buying food for their daily livelihoods. Most of them resorted to eating less nutritious food as well as skipping meals, thus risking their health safety and well-being. Despite Malawi's historical record of being vulnerable to food insecurity, we validate our understanding that COVID-19 policy measures in place by the Government of Malawi have aggravated food insecurity. We suggest that the Malawi

government should design immediate interventions such as relief fund packages targeting the urban poor to rescue them from being vulnerable to food insecurities while containing the pandemic.

## **Declarations**

### **Ethics approval and consent to participate**

Ethics approval to conduct this study was obtained from the University of Livingstonia research ethics committee in Malawi by the third author (protocol number: UNILIA-REC/1/CUP 2/01). We sought written permission from the Blantyre city Assembly. We also obtained written consent from the participants prior to the interviews.

### **Consent for publication**

Participants were informed that the study will be published purely for academic purpose. Upon understanding the objective of the research, all participants gave a consent to publish this manuscript

### **Availability of data and materials**

Considering the nature of the study as it contains some sensitive information from vulnerable groups such as sex workers some of the participants, the raw data will not be publicly shared following the guidelines for ethics. However, for scholars who want to validate the study, contact the corresponding author, and follow necessary procedure for data request.

### **Competing interest**

We declare no competing interest

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This study received no funding from any institution or organization.

### **Author's contributions**

MD: Conceptualized and wrote the first draft of the manuscript

PM: Data analysis and presentation

GNCM: Reviewing and editing

EC: Final review and editing

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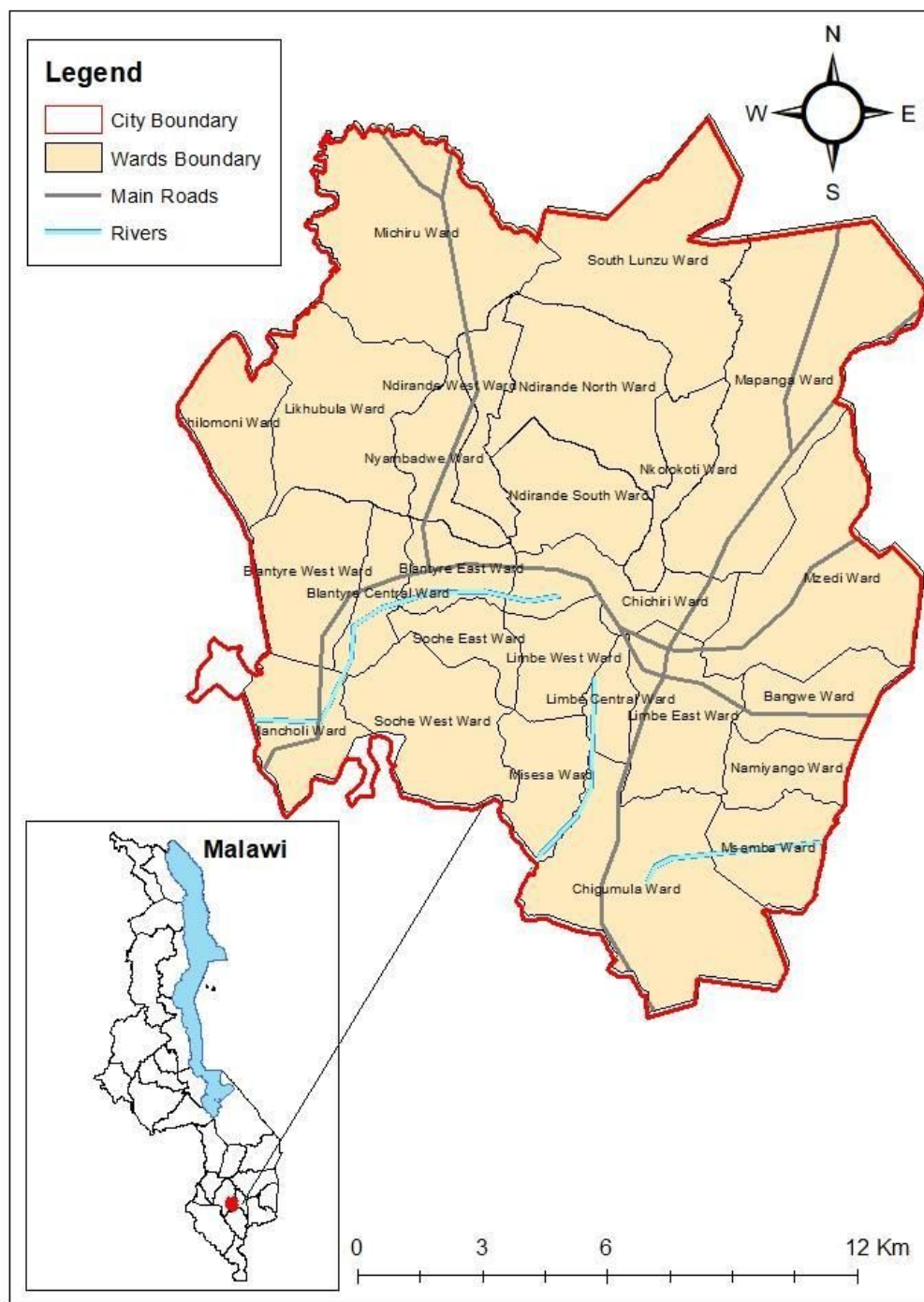
to the University of Livingstonia's research committee and the Blantyre city council for granting us a permission to conduct this study.

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## Figures



**Figure 1**

Location of Blantyre city within Malawi Note: The designations employed and the presentation of the material on this map do not imply the expression of any opinion whatsoever on the part of Research Square concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. This map has been provided by the authors.