






A review of the relevance of bottle gourd in Eastern and Southern African traditional music, and social life



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Background: The history of several communities and tribes in Africa is incomplete without emphasising on the crucial role of the Cucurbitaceae family, especially the calabash or dried gourds, in Africa. The plant is extensively used in several traditional ceremonies and spiritual exercises, and in the production of various traditional African musical instruments which proffer economic incentives to stakeholders.

Aim: To discuss the relevance of the bottle gourd in Eastern and Southern African nations in relation to the production of traditional musical instruments; the uses and impacts of the traditional musical instruments; and their morphology.

Methods: A literature search was conducted on electronic databases such as *Google Scholar*, *Google books*, *Scopus*, and *Web of Science*. The search was performed using several terms and free text words, combining them in an appropriate manner. The authors further set inclusion and exclusion criteria to screen for relevant articles. Each of the identified articles was independently reviewed to determine eligibility and to extract study information.

Results: The African continent has a deeply rich and fascinating traditional and cultural heritage such as ancestral worship, cleansing ceremonies, spiritual ceremonies, intervillage ceremonies and competitions, and royal ceremonies like enthronement of kings, royal weddings, royal funerals, and appeasement of the gods. Traditional musical instruments made with gourds (as the resonator) are prominently played during these ceremonies and spiritual exercises. The ceremonies are often accompanied by chanting and singing whilst traditional musical instruments such as rattles made of gourds or chordophones, in which gourds are used as resonators, are played.

Conclusion: Bottle gourd is an important raw material in the assemblage of several Southern and Eastern Africa traditional musical instruments and is highly revered in the socio-cultural ceremonies and spiritual exercises of several tribes and communities across these regions. Hence, bottle gourd plays a vital role as a bedrock of the culture, social and spiritual life of these people and therefore reflects in the history and daily life of the Southern and Eastern Africans.

Keywords: bottle gourd; traditional musical instruments; harps; lutes; cultural and spiritual ceremonies.

Introduction

Africa has an abundance of plant resources with cultural, historical, aesthetic, and commercial significance. A major example of such plants is the Cucurbitaceae (the gourd family) which has about 960 species and 130 genera distributed mainly in tropical and subtropical regions of the world (Dhiman et al. 2012; Schaffer & Paris 2016). The family is often referred to as cucurbits (Kocyan et al. 2007; Dhiman et al. 2012). This group of plants have been playing important roles in the cultural systems of the African nations for decades which make them highly relevant to the Africans. *Lagenaria siceraria* is a unique, multipurpose member of the family Cucurbitaceae and is a crucial tool in the history, socio-cultural and traditional music industry of many African nations. The history of several African nations is incomplete without the highlight of the significant role of the bottle gourd in royal battles, establishment of kingdoms, creation of the earth, amongst others.

Lagenaria, a plant species of remarkable morphology

The genus *Lagenaria* comprises six species, five wild and one domesticated (Ellert 2006). The wild species of this genus are of African origin and are well distributed across the continent. The discovery

of a wild indigenous species in Zimbabwe by Decker-Walters et al. (2001) proofs that *Lagenaria* species originated from Africa. *Lagenaria siceraria* (*L. siceraria*) is indigenous to Africa (Erickson et al. 2005). This claim had also been suggested by (Whitaker 1948) who thought Africa was its original home. The bottle gourd, *L. siceraria* (Mol) Standley has large hairy and rounded leaves with large vines bearing wide white flowers (~10 cm) that open at night (Schaffer & Paris 2016), and produces fruit that has benefitted humans across continents, climates, and cultures for thousands of years (Ellert 2006). The plant produces fruits with tremendous and fascinating shapes and sizes (Schaffer & Paris 2016). The various shapes include: oblate, spherical (or ovoid), and pyriform. Other shapes include: club-shaped, dipper-shaped, bilobal, or cylindrical (Jeffrey & Heiser 1982). Some of the fruit shapes recorded in Africa are: Snake Gourd, Pot Gourd, Bushel Gourd, African Bottle Gourd, Indian Gourd, Caveman Club Gourd, Cup Gourd Kettle Gourd, Long Handle Dipper Gourd, Extra Large Pawpaw Gourd, Watted Bushel Gourd, Penis Shield Gourd, Palm Wine Gourd, Swan Gourd, Water Jug Gourd, Mini Dipper Gourd, Chinese Bottle Gourd, Long Siphon Gourd, Powder Horn Gourd, Goose Neck Gourd, Base Ball Gourd, Bird House Gourd, Nigeria Rattle Gourd and Microphone Gourd (Awala, Ndukwu & Agbagwa 2019). Bottle gourd is often referred to as the fruit of the Calabash plant (*Crescentia cujete*) that is commonly known as Calabash. However, to avoid misconception, the use of the word 'Calabash' in this review will refer only to the dried fruit or finished product of *L. siceraria* and have no reference to Calabash plant (*Crescentia cujete*). Morphologically, *Crescentia cujete* plant is a tree (Murch et al. 2004) whilst *L. siceraria* is a climber (Taş et al. 2019).

Significance of study

The parts of the bottle gourd plant are used as food (Grosskinsky & Gullick 1999; Mokganya & Tshisikhawe 2019; Van Wyk 2011) and utilised in the treatment of various diseases in different communities in Southern and Eastern Africa. Furthermore, the plant is used in daily activities as a container for food and drinks amongst other usage. However, the crucial role of this plant in the manufacture of African traditional musical instruments have been less represented in scientific literature. Since the ancient times, Africans have used raw materials derived from their environment to create various tools and instruments. Dried bottle gourd has been used to manufacture a variety of the musical instruments that are played to harmonise songs during traditional ceremonies.

A very important aspect of Africa's cultural heritage is its music and celebrations (a variety of celebrations which include christening ceremonies, initiation into manhood and womanhood, post-circumcision ceremonies, wedding ceremonies, agricultural harvests, and royal ceremonies). These celebrations are hosted with traditional musical instruments played by musicians or singers. Some of these African musical instruments were acquired by Europeans and Americans who visited Africa in the past centuries and have been deposited into museums in Europe and America. It is thus important to document the various musical instruments of African origin in

which bottle gourd is a major part of the assemblage since these instruments are crucial part of African history and heritage.

Aims and objectives

The aim of this review was to investigate musical instruments in which bottle gourd is part of the assemblage. The objectives of the review were to investigate:

1. the musical instruments specific to each tribe or similar to those found in other tribes within the same region of Eastern and Southern Africa
2. the use or relevance of these musical instruments to the history, social and spiritual life of Eastern and Southern Africans, and
3. the specific ceremonies during which these musical instruments are used.

Methodology

The research questions and objectives were clearly identified. Google Scholar, ScienceDirect, and SpringerLink were the indexed databases used for this review. These databases were used because of their recognised indexing protocols for citations thus ensuring that only quality articles are used for this study. Although Google search engine was used in search of relevant images of the traditional musical instruments. The keywords search strings used were: 'East Africa traditional musical instruments made with bottle gourd', 'Southern Africa traditional musical instruments made with bottle gourd' and 'bottle gourds and African traditional music'.

Results and discussion

The bottle gourd is a very important raw material used in the ensemble of several African musical instruments such as chordophones, shakers, and rattles. Whilst some musical instruments are unique to certain tribes in Southern and Eastern Africa, most are similar with minor variations such as the number of strings and their names as evidenced in Figures 1, 2, 4, 7 and 8. The traditional musical instruments are used for a variety of purposes which include to please ancestors, ancestral worship, to invite ancestors' spirits and cult initiation; festivals, wedding ceremonies, housewarming, recreation, and entertainment, intervillage competitions, healing; singing praises to community leaders, official ceremonies and instrument used in some educational system; and king coronation, royal funerals, and rites.

Southern African musical instruments made with gourds

Although there are differences between the many musical bows, all have two things in common: a resonator and at least two fundamental musical notes (Lucia 2005). There are similarities in the traditional musical instruments used in southern African countries (Stacey 2017). For instance, the IsiZulu Ugubhu (Figure 1) of South Africa shares similarities with that of Swazi Ligubhu of Swaziland. The Ugubhu is an 'old traditional musical instrument that was



Source: Mandela, T., 2005, 'The revival and revitalization of musical bow practice in South Africa', PhD thesis, University of Cape Town, Cape Town

FIGURE 1: Ugubu.



Source: Johnston, T.F., 1985, 'Meaning and function in Shangana-Tsonga musical instruments', *Africa Insight* 15(4), 283–287

FIGURE 2: Man playing Xitende.

played during the time of King Shaka' (Mandela 2005). The wide-mouthed gourd (used as a water or beer container) is used as a resonator (Mandela 2005). These instruments are unbraced and gourd-resonated musical bow. The Xitende (Figure 2) of Mozambique is like the braced and gourd-resonated Makhweyane bow of Swaziland. IsiZulu Umakhweyana bow of South Africa and the Makhweyane bow of Swaziland are also alike (Figure 3). Although there are differences between these bows, they have a resonator and at least two fundamental musical notes in common (Lucia 2005).

There are different bows in South Africa used by different tribes such as the IsiZulu Umakhweyana, Ugubu, Umqangala, Thomo, and Xhosa Uhadi (Lucia 2005). The Xhosa Uhadi (Figure 4) musical bow is produced from a dried gourd and other materials. The gourd plays the crucial role of holding the instrument together with strings passed into the small two holes that are opened when dry and ready to be used. The gourd is also used as a resonator (Pepu 2018).



Source: Kuipers, L., 1972, 'Making music in Swaziland', *Images of the world* 1

FIGURE 3: A Swazi girl playing Makhweyane.



Source: Warner, G., 2020, *uhadi & umruhbe: a resonant Xhosa tradition*, Garland Magazine

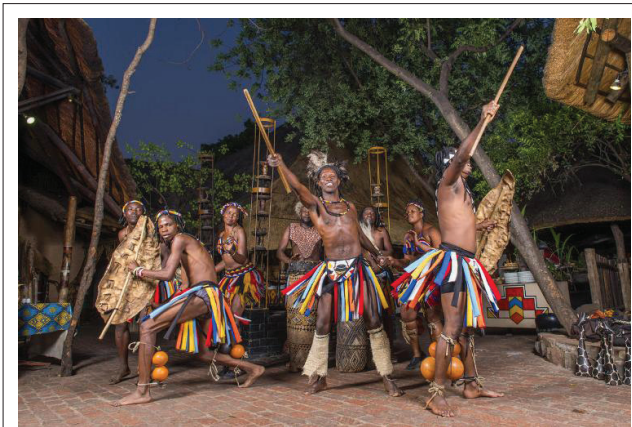
FIGURE 4: Students playing Xhosa Uhadi.

The Swazi Makhweyane musical bow is a gourd-resonated single-string musical bow characteristically performed by men and women as a solo instrument (Stacey 2017). The Makhweyane is one of the most important and popular traditional musical instruments of Swaziland. It is a tall musical bow often made by the people based in the middle and lowveld rural areas of Swaziland, and is considered the national instrument of Swaziland. Traditionally, young women learn to play it before marriage (Stacey 2017).



Source: Peel, T. & Peel, B., n.d., *Free guide to Victoria Falls: One of the seven natural wonders of the world*, Victoriafalls-guide

FIGURE 5: A pair of Hosho.



Source: Peel, T. & Peel, B., n.d., *Free guide to Victoria Falls: One of the seven natural wonders of the world*, Victoriafalls-guide

FIGURE 6: Zimbabwean performers wearing Magavhu (leg rattles) during a performance at Victoria Falls, Zimbabwe.

Xitende is a braced gourd made from a bent branch of the morethloa tree and a calabash attached near the centre (Mazuze 2006). This bow is not mouth-resonated, hence the player can and usually sings whilst playing (Levine 2005). The height of the instrument varies and could be about 2 m. It is mostly used in the southern region of Mozambique to please ancestors who used to be musicians whilst alive (Mazuze 2006).

In Zimbabwe, Hosho (Figure 5) is used for baby lullabies, and it is the most available instrument for such purpose (Nota 2017). It is a traditional rattle played during the performance of Shona traditional dances (Machingura 2016). The use of Hosho instrumental performance amongst the Shona, Karanga, and Ndebele people of Zimbabwe is an ancient practice (Nota 2017). It is made of small pumpkin gourds with seeds or small pebbles placed inside the gourds to produce sound when it is played (Machingura 2016). The Hosho performances have been linked to the Ndau healing processes, ancestral worship, courtship, and thanksgiving ceremonies (Nota 2017).

Magavhu (Figure 6) are leg rattles traditionally made using gourds and filled with Hota seeds, like the Hosho. The



Source: Turino, T., 1992, 'The music of sub-Saharan Africa', *Excursions in world music* 2, 161–190

FIGURE 7: Mbira.

Magavhu helps transmit the energy of the prayer as the dancer stomp out beats. In Zimbabwe, Hosho, Magavhu and Mbira are used to invite ancestral spirits (Nota 2017).

The class of lamellaphones is highly developed, and traditional music is richly complex and important in the life of Zimbabweans, where Mbira-type instruments have been played for 600 years or more (Jones 1992). There are at least five types of Mbiras used by the Shona people; each consisting of one or more rows of different metal tongues (or keys) sizes fixed on a wooden soundboard. The instrument is placed inside a gourd calabash resonator (these days often made of fibreglass) to amplify the sound (Jones 2008; Figure 7). The local music educators have adapted a 15-key variant of the Karimba which is often played in Zambia and Mozambique as well as Zimbabwe schools. This instrument is also called Nyungwe or nyunga (Tracey 1961) and Mbira, and is not traditionally associated with indigenous spirit possession practices. It is commonly used in the educational system and in many urban areas of the country (Jones 2008).

However, the Mbira described by Paul Berliner in his book, 'The Soul of Mbira (1978) is a 22 and 25-key Mbira dzavadzimu. This type of Mbira is also referred to as *nhare* (iron), *mbira huru* (large *mbira*) or simply 'mbira' by players (Jones 2008). Mbira dzavadzimu is mostly associated with the Zezuru people of the central Mashonaland region and has gathered most attention both locally (Zimbabwe) and internationally. In the 1960s, Mbira dzavadzimu was the most used mbira for several reasons which include the access to radio broadcasting and recording studios enjoyed by players in and around the capital cities (Jones 1992; Turino 1998). However, the principal function of the Mbira dzavadzimu is in ceremonies for the vadzimu (singular: mudzimu) – ancestral spirits (spirits of late elders such as mothers, grandmothers, fathers, and grandfathers) of the immediate family who care for their living



Source: Seyani, M., 2014, *The militia called Malipenga*, The Nation

FIGURE 8: Malawians during Malipenga, holding gourd Kazoo.

descendants. Nonetheless, the instrument is played in many circumstances and for different types of entertainment, alone or in groups.

Dindua is held by a brass wire on which a gourd is tied to those functions as an amplifier (Pereira 2019). Marimba is a traditional musical instrument composed of small bars of wood of various sizes which are connected by leather straps, below each wooden bar are small interconnecting gourds fastened with wax (Pereira 2019). The gourds which are of various sizes are perforated and the holes are covered with a resistant film taken from the intestines of animals (Pereira 2019). The gourds and pieces of wood are placed in a frame also made of wood, which allows it to be transported easily (Pereira 2019). The most common Marimba has 10 wooden bars (Pereira 2019).

In Botswana, hand-held rattles commonly known as Woso are usually made from small Makavu (squash) gourds with naturally curved stems which are used as the handle (Phibion 2006). The pulp is removed from the bottle gourd and hard seeds or pebbles are placed inside to create a characteristic sound (tjaka-tjaka) that 'serves for step-emphasis during intricate movements' (Phibion 2006). Hollowed fruit mounted on sticks are also used for this purpose. At each end of the dried gourd, a circular hole is made, through which a stick is passed through the lower end and serves as a handle (Phibion 2006). Rattles are never played alone as they are always accompanied by other instruments and singing. Their musical role within an ensemble differs according to the type of music or dance. 'In many traditional dances, each player has a rattle with which he or she sounds a basic rhythm while singing or dancing' (Jones 1992).

Ulimba is a traditional musical instrument of Malawi (Strumpf 1999). It is a gourd-resonated xylophone of Nsanje district, Malawi. Lipenga (plural-Malipenga) is a gourd trumpet used during the Malipenga (Figure 8) which is performed more frequently by the people of lake-shore communities in Malawi (Strumpf 1999). The Malawi Kazoo is made of a dried gourd and a membrane made from either an eggshell or a spider's cobweb (Nthala 2009). A resonating hole is drilled on one end of an empty, dried gourd (Nthala



Source: Neil, M. & Neil, R., 2006, *Sing to the Well (Tanzania) CD & DVD – 100% sales to Tanzania, Voices from the nations.org*, viewed n.d., from <http://www.voicesfromthenations.org/product/sing-well-tanzania/>

FIGURE 9: Men playing Zeze.

2009). The hole is often made at the tip of the neck of the gourd whilst another hole which serves at the mouthpiece is made about five cm away from the tip (Nthala 2009). The cobweb is glued to the tip of the gourd neck with a special sap from the Nkhadze tree (*Arthrothamnus tirucalli*) (Nthala 2009). The parts of the Mganda Kazoo are the resonating chamber, resonating hole, resonating membrane, mouth hole, and handle (Nthala 2009). All the Mganda genres use this type of kazoo whilst the older Mganda use smaller high-pitched kazoos (Tinala), in addition to the one described above (Nthala 2009). Traditionally, the Mganda dance was performed for entertainment and recreation which includes wedding ceremonies and intervillage competitions (Nthala 2009).

East African traditional musical instruments made from gourd and their cultural relevance

In east Africa, open-ended tubes made of segments of gourd and calabash are often used in trumpet ensembles (Teffer 2006). Traditional musical instruments include gourd or calabash rattles and drums. Concussion idiophones play an important role in accompanying the flute or trumpet ensembles. The one-stringed fiddle known as Sese or Zeze (Figure 9) is indigenous to the East and Central African countries (Pantaleoni & Nketia 1975). It is called Sese or Zeze in Zaire, Kenya, and Tanzania, and Endingini in Uganda (Pantaleoni & Nketia 1975). In Kenya, this type of



Source: Gansemans, J., 2006, 'Les instruments de musique du Rwanda,' *Étude ethnomusicologique* 2, 361.

FIGURE 10: Idono.

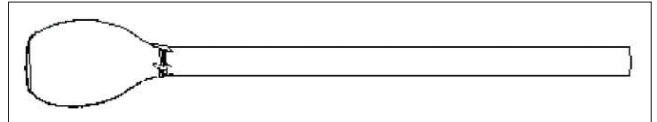


Source: Isabirye, J., 2021, 'Indigenous music learning in contemporary contexts: Nurturing learner identity, agency, and passion,' *Research Studies in Music Education* 43(2), 239–258

FIGURE 11: Young girl playing kigwala (singular of Bigwala).

musical instrument is referred to as Ekegogo (Odwar 2007) and Izeze or Chizeze in Tanzania (Kubik 1984). The resonator is often made of calabash or other hard materials. Vipenga, is a S-shaped trumpet/horn made from a gourd by the Wanyakyusa community of Tanzania (Teffera 2006). Idono (Burundi musical instrument) is a large bow-like monochord instrument with bottle gourd attached for resonance (Cox 1969).

Bigwala is a Lusoga word that refers to the gourd trumpets (Figure 11) music and dance of the Basoga people of Uganda (Abazov 2009; Sobania 2003). According to the people of the Basoga communities, a continuous practice of Bigwala greatly improved their health (Teffera 2006) Also, their emotional health improved and as a result, their families are more settled and peaceful as the Bigwala music helped to pacify their minds (Abazov 2009; Sobania 2003). Thus, with the continuous use of Bigwala, the Basoga people envision peace in their communities and the future generations. Bigwala role in the community is noteworthy. It includes educating the young generation about diverse issues of their societal history which directly contributes to the existence and survival of the Basoga community. Youth



Source: Teffera, T., 2006, 'The role of traditional music among East African societies: The case of selected aerophones', *Tautosakos Darbai XXXII*, 32.

FIGURE 12: Asukusuk of the Teso.



Source: Teffera, T., 2006, 'The Role of Traditional Music Among East African Societies 1', *Tautosakos Darbai XXXII*, 36–49

FIGURE 13: Uluru.

learned how to grow gourds because it is a very important raw material used to make Bigwala (Pier 2015). As a result, there is an abundance of gourd in the communities. Youth learned to make and play the Bigwala, and to dance to the music. The Bigwala as part of the Basoga culture is sustained and is played during royal functions such as the Busoga King coronation and royal funeral rituals (Abazov 2009; Sobania 2003). It is also performed outside the royal setting for commoners at social ceremonies such as marriage, funeral rites, and housewarming (Abazov 2009; Sobania 2003).

Asukusuk (Figure 12) is a trumpet/horn made from wood and gourd used by Teso people of Uganda (Teffera 2006). Eggwara, Akawunde or Kawunde is a trumpet/horn made from gourd segments by the Ganda community of Uganda (Teffera 2006). Baganda traditional musicians play rattles made of gourds (Teffera 2006). Icombi is a trumpet or horn made from wood and gourd and used by the Gishu people of Uganda (Teffera 2006). Uluru or Luru (Figure 13) is a trumpet/horn made from bamboo and gourd by the Madi and Lugbara people of Uganda (Teffera 2006).

The traditional musical instruments used in Kenya include horns which are made from a large gourd (Teffera 2006). Abu is a trumpet/horn made from gourd segments used by the Luo community of Kenya country (Teffera 2006). The Luo people of Southwestern Kenya have a wide range of musical instruments amongst which is a five- to six-foot-long horn called a Bu, made from large gourds (Teffera 2006). Large gourds are used as the soundbox of stringed instruments which include the eight-stringed, lyre-like Nyatiti (Teffera 2006). These instruments were traditionally produced using local and accessible materials and plucked by orators, singers, professional musicians to make a living by singing praises of community leaders who, along with others pay singers after enjoying their music (Teffera 2006). A project initiated by the Kyanika Adult Women's



Source: Teffera, T., 2006, 'The Role of Traditional Music Among East African Societies 1', *Tautosakos Darbai XXXII*, 36–49

FIGURE 14: Men playing Waza in Ethiopia.

Group, together with two national organisations and the International Plant Genetic Resources Institute (IPGRI) sourced and preserve crucial gourd germplasm from Africa and perhaps other parts of world in the Gourd Museum located at Kitui district, Eastern Kenya (National Museums of Kenya 2006). The museum has a dedicated section serving as the gene bank as well as providing training and educational resources on gourd-related information (National Museums of Kenya 2006).

In the Waza (Figure 14) trumpet ensemble of the Berta, about four to six female participants usually shake gourd rattles while they simultaneously sing and dance (Teffera 2006). End-blown trumpets of the Berta (Ethiopia, Sudan) called Waza are constructed of conical segments of calabash and fit in one another like a telescope in combination with the side-blown goat horn Angari and the wooden ideophone Bulu-pale (Teffera 2006). Bol Negero, an aerophone, is made of bamboo, calabash, and used by Berta people of Ethiopia (Teffera 2006). Waza is a trumpet/horn made from calabash segments used by Berta people of Ethiopia and Sudan (Teffera 2006). Dussul trumpet/horn used by Nymang people of Sudan is made of plastic tubes and gourds (Teffera 2006). Kanga or Akanga, a trumpet/horn made from the gourd, is used by Dajo, Lotuko, and Bur people of Sudan (Teffera 2006). Adolo is a Sudanese traditional trumpet/horn made from wood and calabash by the Sudanese (Teffera 2006).

Conclusion

The versatile nature of Cucurbitaceae species as part of the daily lives and history of the African people and their roles in the other crucial aspects of life of the African people makes it to be highly revered in the Southern and Eastern African countries. Amongst the cultural heritage are musical lutes and harps in which bottle gourd is used as a raw material. The bottle gourd is an integral part of these musical instruments as it acts as the resonator. Hence, bottle gourd plays vital role in the African traditional music industry. The domestication, cultivation, and conservation of bottle gourd should be included in cultural and natural resource policies in Africa. This will help to preserve the African cultural heritage in relation to traditional musical instruments and religious ceremonies.

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Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

Authors' contributions

With the submission of this manuscript, we would like to undertake that this work is originally put together by the authors and no part thereof has been submitted nor published elsewhere. All authors agree with the contents of the manuscript and its submission to the journal. O.O.F. conceived the idea and designed the article. O.O.F. and O.O.O. wrote the article while G.D.A., R.M.C. and K.N. gave guidance and edited manuscript. No part of the research has been published in any form elsewhere.

Ethical considerations

This article followed all ethical standards for research without direct contact with human or animal subjects.

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Data availability

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Disclaimer

The views and opinions expressed in this article are those of the authors and do not necessarily reflect the official policy or position of any affiliated agency of the authors.

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