

(REVIEW ARTICLE)



## Ecological analysis in diplomacy, geopolitics and international cooperation: Driving accountability for social impact

Chrysanthus Chukwuma \*

*The Chrysanthus Centre for Future-Oriented Studies Abakaliki, Ebonyi State, Nigeria.*

International Journal of Frontline Research in Multidisciplinary Studies, 2022, 01(01), 022-034

Publication history: Received on 05 April 2022; revised on 07 June 2022; accepted on 10 June 2022

Article DOI: <https://doi.org/10.56355/ijfrms.2022.1.1.0030>

### Abstract

It is not essentially the objective of this paper to elaborately (re)construct the salient spheres of diplomacy, geopolitics and international cooperation as they impact on civilization, rather it is a presentation regarding the essential disparities of inter alia scarce resources, military efforts, trade, and transboundary realizations of pollutants and irritants into the biosphere. Due to the multidimensional origin of environmental perturbations, although, with its ingrained complexity, it has become necessary to inculcate all pertinent concerns in decision making locally and globally. The levels of significant risk factors and social decision-making continue to undergo diverse alterations in several countries with their attendant geopolitics, gain-of-function research in biosecurity, environment, and health which necessitate international cooperation for peaceful coexistence within and across borders. A proper understanding of the cumulative impact of these changes in erstwhile, current and future trends is vital to harness and curb environmental disasters in vulnerable ecosystem cadastres, emerging and reemerging communicable and noncommunicable diseases or disorders.

**Keywords:** Foreign policy; Transboundary; Biodiversity; Climate change

### 1. Introduction

Global changes, challenges and issues require global resolutions, especially as these impact on our environment and health [1-3]. Changes or trends in risk factor presentations or levels can be determined via disparate or collaborative spatiotemporal specific environmental cadastre surveys. International conflicts, hostilities, war, commodity crisis, inflation, trade imperfection, supply-chain disruption and labour shortages are being rebranded by multinationals and industrialised countries as environmentally virtuous policies. The pertinent goals will be to provide the latitude for expansive and valuable reportage in estimating the occurrence of major perturbations and risk factors bearing in mind multifactorial risks in diplomacy, geopolitics and international cooperation. Green diplomacy entails cooperation of all stakeholders encompassing state and non-state actors involved in proffering solutions to global issues. The essence of diplomacy in geopolitics and international cooperation in all endeavours is to defend multilateral order and democratic values [4-6].

### 2. Conceptual perspectives

Diplomacy enhances international cooperation to geopolitically promote environment and health and manage diverse global microbial threats, noncommunicable and communicable diseases, emerging and reemerging infectious diseases, such as COVID-19 and AIDS which are pandemic disorders [1-4]; and classic representatives of international externalities which must need more than a single government intervention to optimally confront negative impacts.

\* Corresponding author: Chrysanthus Chukwuma

The Chrysanthus Centre for Future-Oriented Studies Abakaliki, Ebonyi State, Nigeria.

Thus, international cooperation allows for extensive and effective approach to address local disease outbreaks, sensitize stakeholders on global catastrophes, investigate, harness and coordinate research and development, production, availability and dissemination of vaccines [5]; with accordance on treatment modalities, restriction procedures or quarantine for cross-border travelers [1, 3]. Also, the global climate change effect constitutes the archetypal global externality. A determined concentration of carbon dioxide emitted corresponds to similar greenhouse impact. An isolated government regulation is not likely to solely amend maldis position of incentives due to the free-rider challenges across governments. Thus, an international accord such as the 2015 Paris climate agreement is pertinent [6].

---

### **3. Reasons for concern**

Accelerated alterations in global events necessitate effervescent, efficacious and newfangled international cooperation, environmental, health, demographic and technological paradigmatic shifts to redefine the extant global order as is currently defined in all perspectives. Realistically, there are no essentially new discoveries, revelations or presentations for inextricably-linked relationships or associations regarding public health, environment, diplomacy, biosecurity and geopolitics [7]. These have been subjected intensively, arduously and rigorously via numerous prisms and lenses and have become surreptitiously and perspicuously participial in our ambient for ages. Geopolitical determinants and variables are no more observable in exclusion of biosecurity, wherein social malaise, environmental degradation, abject poverty, corruption, greed, avarice, unemployment, urbanisation with urban squalor, and industrialisation expansively impact on local and global diplomacy, international cooperation and geopolitical landscapes. The presenting COVID-19 pandemic era has metamorphosed into a constitutive determining factor and variable [8]. These have created the provision, latitude, modality and trajectory for international organizations to be in convergence with agreements, instruments for enhanced incorporation of biosecurity, environmental, and public health challenges as well as issues in a chemical world [6, 9, 10].

Biodiversity is crucial to achieve the Sustainable Development Goals, abrogating the existential climate change threat, harnessing and curbing land degradation, creating and enhancing food security as well as undergirding progress in human health and environment as in the perennial remembrance on the International Day for Biological Diversity on May 22 every year. It is evident that an expansive portion of the atmospheric, terrestrial and aquatic precincts have undergone significant alterations due to anthropogenic activities [6, 9, 10], necessitating termination of the unconscionable, intransigent and destructive belligerence against nature because presents resolutions for green and inclusive growth and development. It is a conscionable measure for governments to be in sync and convergence in a global biodiversity conceptual framework with pellucid and definable targets to prefer Planet Earth in the pedestrian trajectory of restoration and sustainability by the Year 2030. The holistic conceptual framework must address the drivers of biodiversity dissipation and enable profound and transformative changes in congenial correlation with nature via effective and efficient protection of local and global atmospheric, terrestrial and aquatic habitats, underpinning sustainable and equitable production, distribution and consumption, applying nature-dependent solutions in climate change and terminating deleterious subsidies which culminate in the degradation of human health and environment [6, 9, 10]. Global agreement with social responsibility in diplomacy, geopolitics and international cooperation must lawfully and legally mobilize and finance resources to drive veritable nature-friendly investments, positively underpinning full-fledged benefits through the dividends of biological diversity for the accomplishment of these goals and implementation of the 2050 vision for congenial cohabitation with nature per environment and health. All veritable actors must provide due cognizance to equity and human rights with reverence to the global population, particularly as they concern vulnerable and indigeneous populations being residents of the vast territories of the biological diversity as applicable to human health and environment. These must be accomplished in collaboration with the residents for understanding and awareness of biodiversity, environment and health challenges, issues and opportunities to save the indispensable and delicate natural wealth of renewable and nonrenewable resources in Planet Earth [9].

---

### **4. Conditions precedent for sustainable national and international relations**

In order to achieve an effective and efficient geopolitical power, each region of the world must place ecological security and diplomacy in the fulcrum or pivot of its foreign and security policies with the approach to achieve practicable and newfangled strategies which promote systematic inducement in both local and global levels. Incontrovertibly, the prime existential determination and disposition of any country is invariably in protective autonomy that envisages hardcore geopolitical stances for survival in an ambient of entropy and restrictive uncertain global order. Comparative analyses concerning cross-national policy transfer and dissemination correlate with an outstanding magnitude of policy convergence in diverse fields as are evident in environmental and health disciplines [11]. There is anecdotal information regarding the mechanisms responsible for this phenomenon; and the information available may be of merely heuristic

value. Investigations depict disparate convergence mechanisms which may be significant sources of cross-national policy, such as, regulatory competition, international cooperation and transnational communication.

The systematic accumulation of documentary data and salient evidence will qualitatively enhance and improve interrelatedness between Member States of the UN, UNEP, and WHO in specific and encompassing sectors of economic, political and social systems in the harmonization of national interests by means of international cooperation in efficiently and effectively combatting local and global environmental perturbations with regional perspectives. To achieve sustainable goals, effective and efficient management must be called into play. In recent decades, the environment has shifted from local concern [12] to international cooperation undergirded by diplomacy and geopolitics. Effective and efficient tools regarding integrative environmental planning, evaluation, monitoring, assessment and decision-making have been extant expansively for indepth sustainable development and progress in Eastern European centrally planned economies, the West and certain developed countries, such as Japan [13]. However, these have not been tenable in developing countries due to the complexity in instrumental development and application. The inhibiting factors include non-compliance of conditions precedent due to absence or paucity of information-base, diminished administrative competence, inadequate citizen participation, awareness [14] dereliction in political will and the provision or allocation of scarce resources.

These are evident as natural and anthropogenic processes affect quality of life by land degradation, groundwater resources, biodiversity and a vast proportion of the biosphere. To enable conditions precedent, it is pertinent that developing nations maximise the benefits and mitigate the negative aspects of natural and anthropogenic activities for the achievement of poverty alleviation. Baseline data on the economic, fiscal, social, land and flora, as well as environmental impacts and plans must conventionally be designed to consider and promulgate ways and means to assess costs and environmental monitoring to minimize health, environmental and socio-cultural risks [15]. Communities need leadership, partnerships, sharing of experiences and support from all levels of government levels, diplomacy, geopolitics and international cooperation to preserve land, groundwater resources and biodiversity. Broader policies must be adopted in a coordinated and convergent mode to deal with interrelated health, environmental and developmental challenges, issues and opportunities [16] despite the vast uncertainty surrounding the characteristics of the problems, especially as regards economically unreliable processes which may culminate in biosphere derangement [17]. The inextricable linkage between development, environment and health is crucial to the visionary expanse of diplomacy, geopolitics and international cooperation. Environment and health perturbations are increasingly exerting untoward global effects on vulnerable populations. The health of nations may not merely be intercepted by deleterious environmental impacts but by food security [18-20] with resultant morbidity and mortality. The variety and magnitude of deranging health effects in a population adverts to the latitude for exposure of environmental factors and pathogens within and beyond national borders. National and international weighting and scale of preference may determine the extant magnitude of the disparities as well as dynamic changes which may characterize the role in diplomacy, geopolitics and international cooperation to identify, control, and eradicate factors [21] which are related to risks locally and globally.

---

## **5. Configuring the empowerment of global regions**

It is feasible for developing countries, the East and West to enhance the conditions precedent for the recognition and implication of action in diplomacy, geopolitics and international cooperation. We need policies which drive equitable sharing of benefits and stimulate concerted global responses and imperatives not merely the reordering of budget priorities [21]. Developing countries can constitute themselves into an authentic global power. They are in the position with expansive latitude to support each other in order to enhance their influence in international organizations. It is pertinent to debate the sustainable future of developing countries. Inasmuch as these countries in smaller regional groups are more or less adequately sustainable in their present constitutions, it becomes inappropriate to developing or non-industrialized countries to allow the current trajectories of cooperation to prevail as the extent of aspirations for the future of our environment. Lacunae in the promulgation and implementation of environmental legislation continue to be a gross impediment in environmental, biodiversity, natural resource protection and conservation in non-industrialised nations [22] in the absence of formidable diplomacy, geopolitics and international cooperation. An effective enactment of environmental legislation and citizen participation [14, 22] that includes goals, priorities and standards in the conceptual framework of local and global environmentst as well as legal stance and policy for liability and compensation due to environmental derangement. In whatever aspects, it is necessary to overcome trade barriers within the perspectives of the common unity of restrictions, constraints, challenges and overregulations placed by industrialised countries on non-industrialised regions. Countries in the Southern Hemisphere must overcome the disparities which a vast majority of them are limited inter alia by languages, cultures, jurisprudence, politics, religion and educational systems. These countries or regions must contrive to explore the pertinence to converge effectively and efficiently in intergovernmental fora, such as the UN, UNEP, WTO, AEA and WHO to deliver outcomes for individual

developing country, and more importantly in aggregate or collectively. There must be mutual defence interoperability, cooperativity and support against local and global terrorism that is strangulating Africa, with threatening extrapolation of nascent turbulence or entropy of refugees into the West.

Inhibitory factors for the convergence in international cooperation may include membership of Commonwealth countries in regional trade blocs, UN ballots with members voting in divergent or disparate trajectories and a deficient biosecurity or military compatibility as evidence that convergent cooperation may not be tenable. These impediments can be obviated via the application of a rethink in our diversities with resultant optimum convergence [23]. Nigeria asserted that the Commonwealth has the potential to become a “real global power” by inter alia enhancing collaborations in trade and security. The Commonwealth Heads of Government Meeting (CHOGM) in June, 2022 envisages the capability for inter alia a purposeful aggregation and convergence for sustainable environmental perspective. The bi-annual senior decision-making body had the host as the Republic of Rwanda; and prescient as the encompassing aggregate of Commonwealth nations is African. The official agenda envisaged the impact of Brexit worldwide. However, the U.K. Global Tariff (UKGT) has diminished, expunged or ameliorated tax burden on numerous imported goods as a landmark in vast aspects of Commonwealth trade and the impact on the environment or ecosystem cadastre [24].

When the economies are unable to practice free trade as anticipated, there is minimal incentive to lower barriers. Inasmuch as association inside trade blocs is not prohibitive, there is latitude in what members can do within respective frameworks. Certain Commonwealth African members are signatories with the UK to product-based trade accords which may affect the environment. However, a potential agreement with the African Continental Free Trade Area (AfCFTA) portends the greatest opportunity as the most expansive free trade ambient worldwide. In 2021, the UK was signatory in the first memorandum of understanding in the world with the nascent bloc, with a future deal inculcating free trade simultaneously with nineteen African Commonwealth members, being representatives of the majority of the GDP of Africa. This might lower the barrier for future agreements between AfCFTA and other Commonwealth members, in furtherance to pave the way for intra-Commonwealth trade. Buoyant trade could undergird sustainable development and environment as well as massive defence cooperation.

African Commonwealth members are actively participate in numerous fora across the continent, such as combatting ISIS-associated terrorists transcending the West African Sahel region, Mozambique in the southern aspect and the Horn of Africa in the East. Military hardwares constitute formidable aspects as equipment for defence in solving the problems for a sustainable environment. It is inconceivable that a globally paramount producer of military apparatus should deprive the association of non-industrialised countries inevitable solution to their problems. If Britain fails to comply. There will be need to seek for solution elsewhere(23).

Although, in Africa, a mosaic of incompatible, incongruous and irreconcilable differences and systems are encountered within Commonwealth Member States with similar missions, interoperability they do present a perspicuous impact. Also, in diplomacy, with coexisting trade and defence, there are extant geopolitical interests. As is evident, the 27 EU Member States tend to undergird each other in UN votes, for instance. Nothing precludes the 54

Commonwealth Member States not to organise and support themselves in order to wield expansive influence [23]. Within the CHOGM, these newfangled opportunities are tenable, when the conditions precedent are in place.

There are varying perspectives and frameworks to be researched, learnt and imbibed from both the theoretical and empirical dimensions of geopolitics and international cooperativity in disparate countries. In these aspects, the UNEP tend to provide ample evidence in the determination of the feasibility of models for action in LMICs. Cognizance of the perspicuous trajectories and implications in the development and environmental assessment and management of both rural and urban precincts of LMICs provides for encouragement and viable action with all stakeholders.

---

## **6. Diplomacy as a gateway for geopolitics and international cooperation**

The entry of the COVID-19 pandemic has triggered accelerated spatiotemporal alterations in unenviable healthcare and socioeconomic burden and complexity in the local and global communities [25]. The world is currently confronted with unprecedented scientific and technological newfangled innovations, challenges and opportunities culminating in nascent issues and dangers. Expansive and indepth theoretical and empirical studies frequently result in new leads and discoveries which may obviate unyielding disparities in the growing components of unilateral, bilateral and multilateral aspects of diplomacy; thus, creating a synergism and symbiotic relationship in the convergence of environmental geopolitics and international cooperation. Currently, modern diplomacy is under the aegis of fundamental accelerating unprecedented rate that ostensibly impacts the constitutive ingredients of diplomacy as evidenced. In addition, these

alterations impact certain aspects of domestic and international politics which were not of immense relevance in diplomacy. Digitalization as a form of technical development is related to the understanding of the functionality in the jurisdiction of diplomacy [26]. There is an accelerating increment in the numerical strength of domestic and international or State actors whose functions invariably interrelate with the enhancement in diplomacy. The general public is increasingly aware and sensitive to salient foreign policy issues which tend to govern diplomacy via diverse platforms, such as social media.

The progressive changes between states, interchanges between government and certain domestic actors invariably govern the propensity of diplomacy to propagate legitimately and effectively [26]. Diplomacy entails achieving complimentary non-coercive agreement between countries with the intention for cooperation with resultant impact in mutual interests. Simultaneously, diplomacy correlates with negotiation in the resolution of conflict for mutual benefit between nations [26]. It is conventionally observed as an alternative to untoward belligerence or war; and regarding the advent of such as an inept presentation or failure in and of diplomacy. Diplomacy oftentimes subsumes features of nonadversarial or nonbelligerent interactions which culminate in optimum beneficial results in a common sustainable development goal. Inasmuch as diplomacy evolves as conventionally nonbelligerent in the bargaining trajectory, it may inculcate inducements which are value additive or coercive, wherein the latter arbitrarily and adversely incorporates the application of intimidating threats and excessive force, with resultant muddling or obliterating of the true and decisive impact of nations involved for the cost-benefit analysis to accept, reject or renege presenting arrangements. Rules and regulations of diplomacy may be contemporaneous and broad-based, with other-restrictive measures which entail a microcosm of the international political inter-relatedness and -relationships extant in a specific or unique period and dimension. Diplomacy has evolved from a conglomeration of manipulation, intrigue and surreptitious offers by the bourgeoisie, oligarchs, administrative and political power holders in respect of the public diplomacy and democracy whereby foreign policy constitutes a continuum of domestic politics. These are pertinent as the 'new diplomacy' connotes efforts by governments, international organizations and nongovernmental or non-state actors to influence other nations. Achieving international and transnational coalition-building is inextricably-linked to effective diplomacy [27]. A concise and simplistic definition of diplomacy is the conducting of international relations via negotiation and dialogue or other trajectories to enhance peaceful relations amongst countries. Diplomacy involves a set of norms, institutions, preambles and discourses critical for the undergirding and fundamental understanding of the evolutionary processes of the international system in conjunction with the evolutionary nondysfunctional, nonarbitrary and normative intendments. Diplomacy must be flexible and devoid of the rigidity and certain conceptual precisions, but taking into cognizance significant spatiotemporal evolutionary or contemporaneous processes and transformations with bilateralism and multilateralism as the undergirding modalities, precepts and tenets. Much is desired of the significance of negotiation in diplomacy regarding the contemporaneous international relations of conflict and cooperation.

---

## **7. Diverse spectra of environment and health perturbations**

Environmental quality and impact of environmental irritants in our health generally depends on policies addressed by national governments and international communities. Global environmental issues are wanton threats to human health, social welfare and wellbeing [9, 28]. Unfortunately, the countries of the world which need to operate in convergence and seek modalities to address presenting problems have their peculiar conceptual, varied and divergent policies and challenges. Globally, numerous concepts have been enacted to determine or explicate the significance of environmental issues to health. The quality of life worldwide is governed by the diplomacy, geopolitics and international cooperation considered in these perspectives via the provisions or latitude in the development of approaches in the sustainable management of biodiversity, plant, animal and human survival including inextricable food-chain linkage, air, soil and water [17, 29-32]. There is veritable essence or pertinence in the discourse regarding the emergence of a nascent global entropy or order based on environmental challenges and issues. Global Environmental Politics (GEP regards the associations of global politics and environmental alterations with particular reference to the attendant consequences of local-global interactions/relationships in environmental management, the repercussions for environmental perturbations and environmental governance with concomitant world political dis(order). Global Environmental Governance (GEG) is the totality of organizations, policy instruments, pecuniary engagements, modalities, tenets and precepts which govern the mechanisms of universal environmental protection. Following the emergence of environmental issues in international fora in the early 1970s, global environmental political forces have accelerated in response. The presenting environmental governance system is a reflection of the development processes. It is perspicuous that the extant GEG system has become more expansive than originally designed and intended. Currently, there are no clearly defined quantitative global health impacts concerning climate change, and the trajectory indicates a future increment. It predicts that higher income countries or industrialised countries more than lower-income countries without competent naturally-based agricultural systems may be encompassed by expansive food insecurity, the emergence and reemergence of diseases as in the COVID-19 pandemic [1-4] and Russian-Ukraine hostilities. It is

pertinent to examine the global health nexus of climate change and pollution with the latitude for an integrative defined systemic policy strategy to extant and envisaged issues..

---

## **8. Modalities for water diplomacy actions**

Water diplomacy pretends intense foreign policy and diplomacy which correlate with shared waters. They depict cooperative, integrative, political, preventative, and technical parameters. Water diplomacy and transboundary water cooperation are conceptually unique. The strategy for the analysis of water diplomacy and interrelated issues is imperative [33]. Irrespective of the absence of a pellucid definition of water diplomacy researchers, policy makers and administrators are taking immense cognizance of water diplomacy as the concept encompasses shifting geopolitics, multiple trajectories, diverse scales, nascent varieties of diplomacy and deleterious water scarcity. The non-compliant approach to improve water supply [34] is an environmental and public health issue of paramount concern. The dilemma facing world governments may connect a contributory modality for water diplomacy in a step-wise Water Diplomacy Paths strategy for the analysis of varied contextual water and associated water diplomacy prerogatives. Five significant features in water diplomacy, such as political, preventative, integrative, cooperative and technical may portend a broad definition regarding water diplomacy and the uniqueness encountered in the inextricable linkage in the concepts of water diplomacy and transboundary water cooperation. The application of the Water Diplomacy Paths strategy is exemplified by case studies in Central Asia, Mekong Region, and Finnish-Russian Water Cooperation involving the jurisdiction of water diplomacy and its principals(33). The possible Water Diplomacy Paths strategy involves four major pathways, such as identifying key themes and comensurate actors; current state analysis; recognition of inappropriate drivers and related factors; and identifying associated water diplomacy potentials. The strategy may provide the latitude and potential to undergird processes of water diplomacy processes in the distinction between water- and diplomacy-specific functionalities regarding water diplomacy as a concept whose practicality exemplifies the future of foreign policy and diplomacy as the importance of shared territorial waters is enhanced. The capability to harness or curb water pollution from trace elements and mining operations is a prime global responsibility in order to obviate untoward impacts on water, land and biodiversity [35]. It is crucial to investigate and explore diverse procedures in order to obviate environmental and natural resource derangement. The present and future global state of water resources are inextricably linked to the behaviour of the administrative, economic, political, and social structures. Globally, focus in water provision is systematically prioritized on potable water, but a vast population of the world depend on water resources of wells, ponds, boreholes, streams, rivers, seas and oceans which are susceptible to contamination and pollution from natural and anthropogenic sources, such as inter alia industrial emissions, municipal waste sites, parasitic organisms, and agricultural inputs. Development of global information and monitoring system is required to obviate further deterioration of water quality and to build equitable state of the resource for the future [36].

---

## **9. The correlation of health with foreign policies**

For centuries, health has always been inextricably linked with domestic and foreign policies; also with contemporaneous global issues, challenges, constraints and opportunities increasing exponentially [37, 38] as legitimate concerns in foreign policies and international politics. The resultant impact has been diversified increased political priorities, prerogatives, privileges and rights in propagating global health, with concomitant augmented funding and interests in global health variations (38). There have been heuristic, anecdotal and paucity of the determination of the characteristic palpable tensions evident in the associations between global health, international politics and the potential impacts of connecting global health actions with foreign policy interests. As enunciated in the inception of this paper, it is imperative to configure the interrelatedness between global health and foreign policy via the determination of the functionalities of health encompassing certain aspects of foreign policy, such as diplomacy, aid, commercial activities/trade, local and global security to unravel the issues, challenges and opportunities relevant in geopolitics to health actions. The increasing pertinence of global health to geopolitics and international cooperation invariably presents opportunities and concerns for actions to promote health development strategies [39]. Currently, foreign policy and global health diplomacy have undergone tremendous transformations.. Diplomacy has tended to entrench itself as a substantial aspect of the global health governance [40]. The COVID-19 pandemic exerted its grim influence globally as multilateral cooperation surfaced as prime constraints and challenges, with global health integrated into geopolitics. WHO has elaborately depicted the pertinence and prominence of global health diplomacy in the convergence of countries to improve, enhance and promote Health for All [41] with rigorous and intensive exploration within the concept, theories and context of international relations to better understand the functionality of political power in the position of formulating and driving negotiations, possibilities and outcomes in global health diplomacy. These have paved the trajectory within the perspectives of international relations to embark on global health diplomacy for nuanced elucidation of geopolitics. The world has metamorphosed into an unprecedented magnitude

envisioned in theoretical and empirical discourse. The extant paradigmatic shift informs nascent international relations and cooperation in global health diplomacy and geopolitics in our environment.

The COVID-19 pandemic unravelled the accelerating expansive worldwide regional inequality in the disparate and disproportionate actions and responses regarding health issues [42]. The main crux is perspicuously the rationale and equitable approach in the resolution of the conflicts between normative global and strategic responsibility and concerns for local interest to promote health aid within vulnerable populations during the COVID-19 pandemic era presenting emerging and/or reemerging variants of infectious diseases [43]. These need to be taken into cognizance in global health diplomacy as a conceptual framework which may ameliorate the bilateral fissures of humanitarianism and international politics as applicable to a COVID-19 case study in North Korea [44]. Health constitutes a veritable ingredient of national interest and human dignity with normative aspects in the propensity for strategic international or transnational cooperation across sovereign borders. The encompassing morale and rationale in global health diplomacy depict how COVID-19 assistance to the vulnerable population in North Korea correlates to the overt self-interest of donors to mitigate or prevent the emergence or reemergence of COVID-19 variants or comorbid infections. It is suggested that the conceptual framework induces all actors, as well as aid recipients to foster global cooperative responsibility in health, whereby global health diplomacy reframes the anxieties and conflicts between humanitarianism and politics, morality and rationality, as well as cosmopolitanism and nationalism in order for complementarity to hold sway over antithetical features [44]. The COVID-19 pandemic has intensively driven the competition between the USA and China, and propagated the reenactment of balance-of-power politics to the extent whereby great power rivalry is liable to derange cooperation and trigger threats to global health. The intense geopolitics sabotaged actions in COVID-19, and is a contributory factor to the negligence and appropriation of emergence and reemergence of inimical gain-of-function research, SARS-CoV-2 variants, controversial vaccine production and applications as well as biased restrictive travels. It is critical to restrict "travel apartheid" in any pandemic that does not constitute an endemic condition (45). The pandemic solely culminated in the most aggravating disruptive enigma since Hiroshima and Nagasaki. The reverberating pathogenic and great power imbroglio transcends beyond COVID-19 as it depicts the interaction modalities of the foreign policies of a vast majority of these countries in global health accompanied by untoward radicalizations in unwholesome trajectories.

COVID-19 vaccines have mitigated and prevented morbidity and mortality of millions of persons worldwide (1,3). However, the morbidity and mortality rates resulting from SARS-CoV-2 or its variants would have been prevented or diminished in low-income countries if the WHO vaccination targets were achievable. The efficacy of Sputnik V COVID-

19 vaccine of Russia was denounced via propaganda. With the overzealousness in COVID-19 issues, it is critical for diplomacy, geopolitics and international relationships intervene in Emergency Use Authorization and booster vaccine doses [45].

It was assumed that advances in science and technology could provide all the solutions to any conceivable health dilemma. Conversely, science and technology have not harnessed and curbed inter alia environmental degradation, AIDS and COVID-19 pandemics, emerging and reemerging diseases, comorbidities, the deleterious health impacts of contemporary lifestyles in affluent ambients, and the increased mobility across frontiers with concomitant accelerated transmission of pollutants [46] and diseases [47] with implications for diplomacy, geopolitics and international relationships. Although, gain-of-function research directs the testing of new scientific theories, novel technique development, discovery and target for treatment of infectious disorders, it is an ambient that must be guided conservatively [44].

---

## 10. Climate change and geopolitical issues and challenges

Climate change constitutes a significant aspect of geopolitical challenge that perturbs every nation; and, therefore, necessitates international cooperation to prevent, ameliorate or solve the problem both locally and globally. The action or inaction of countries to combat this albatross constitutes an important aspect of climate diplomacy. The Paris Agreement [6] is a framework for international cooperation in convergence for creating and developing trust and conformity in a nascent newfangled multilateral system that will facilitate and promote cooperation and action in the present and future. The inaction of certain countries or regions tends to impede the drive for global transformation to climate safety and restoration which are liable to disrupt the ecosystem or ecological niche and threaten the survival of the world. These variables aggravate relationships, climate action and geopolitical security between nations. It is pertinent to act across government ministries, departments and agencies, international organisations, civil society networks with confidence and expertise in diverse geographical and economic sectors with inextricable linkage in real economy dynamics to diplomatic outreach, momentum and facilitators. There are extant needs to undergird catalytic initiatives for cooling solutions and zero-emission transportation and control as well as mechanisms to ensure

systematic formulation for climate migration and habitation using climate diplomacy and economic actors in convergence for a conducive climate. Effective and optimum climate diplomacy must foster support for the Paris Agreement [6] into veritable climate action. Expansive rethinking in climate diplomacy must constitute the framework on global climate action.

The geopolitics of pandemics and climate change converge in their challenging complexity and urgency which demand collective action within global and trans-boundary spectra or frameworks as enunciated in geopolitical tensions and contradictions in global governance and international cooperation in the COVID-19 pandemic. The COVID-19 pandemic portrays an early warning system [48] of the issues, challenges and opportunities inherently present in debilitating international cooperation in global diplomacy. Rather than confronting the COVID-19 pandemic holistically and collectively, countries are ostensibly exhibiting territorial distinctions and independent reactions to the COVID-19 pandemic [49]. As observed, extraordinary modalities have been applied by several countries resulting in restricted rather than overt international partnership and cooperation. The closure of territorial frontiers, social distancing, and local procurement of health and healthcare utilities as well as provision of subsidies for industry and commerce ostensibly confer solace in the domestic ambient but fails to interact directly with the international strategic challenges, issues and opportunities. Irrespective of the economic conditions in disparate global regions, it is the vulnerable populations of the world [50, 51] which are vastly affected as the COVID-19 pandemic with its variants in comorbidity with other emerging and reemerging infectious diseases pose problems which exacerbate or are aggravated by tensions, pressures and conflicts in scarce resources, population density, climate change or disruption. Existentially, these induce and propagate COVID-19 burden disproportionately on extant environmental stress due to diminished encompassing strategies in realistic geopolitical intersection of public health and climate change which negate extant unhealthy geopolitics, rather than promote coordinated global reaction to address perturbations..

---

## 11. Discussion

Global environmental politics within the ambit of international relations pertain to interaction of humans and scarce resources using interdisciplinary strategy. Thus, global research in environmental politics, the implications of environmental perturbations and the drive to surmount the extant and ensuing problems expose governance to unprecedented constraints due to the brief spatiotemporal itinerary of actors in diplomacy and politics. Generally, environmental problems transcend frontiers, thus constituting challenges for international cooperation in global environmental governance and performance. The economic, political, and ecological detachment from the untoward repercussions of global environmental perturbations and the policies to address these have adopted global environmental politics into international relations in diverse classifiable multidimensional [9] disciplines. These have contributed to incontrovertible ethical, equitable and distributive justice challenges [52] issues and opportunities. The lacunae in perceptible balance-of-power politics in global health explicate the unprecedented crass realpolitik of the COVID-19 pandemic. Great power rivalry truncated international cooperation with resultant excoriation of decades of global health progress, and concomitant restoration efforts neglected to confront adverse political environment and health. Generally, the Covid-19 or SARS-CoV-2 perturbations exposed leadership decadence in global health regarding geopolitics per the USA versus the Chinese and Russian propaganda or campaigns to alter power distribution in international systems [52].

Inasmuch as, we are residents in a global village, territorially entrenched factors become of increasing relevance in diplomacy, geopolitics, environment, international cooperation, security, economy, energy and food prices [53]. The political leadership of a country that lays emphasis on domestic and foreign policies would face crucial choices in diplomacy, geopolitics and international relationships to promote sustainable international cooperation, with certain challenges in sustaining the citizenry. With regard to domestic policy, priorities would be in the enacting and passage of a special law to harness and curb the upsurge in healthcare, food, agriculture and energy costs due to internecine conflicts, religiopolitical wars, the East-West conflagration, emerging and reemerging diseases, such as the COVID-19 or SARS-CoV-2 and its variants. In several instances, the government formulates and implements policies which are discordant to either domestic and/or international policies and perspectives; but political leadership must take precedence over the diplomacy and foreign policy of the country. The politics of certain developed/industrialised countries have been inextricably-linked to ultra-nationalistic and nativistic philosophies, with resultant extreme tendencies, such as declaring parts of the world as not conforming to COVID-19/SARS-CoV-2 protocols and vaccinations leading to travel restrictions. Irrespective of the divergence and deviations in diplomacy, foreign and domestic policies, international relationships and cooperation. It is perspicuous that political underpinnings of the nation must prioritise and protect the identity and territorial frontiers and borders of the country in all spheres including health, environment and security. Certain countries are grimly opposed to the belligerent posturings of the West, vis-a-vis, the USA and NATO which do not conform to or do not designate their interests in elevated magnitudes. These countries have pledged to extricate themselves from the encompassing and strangulating ambient of influence by NATO and the USA. In the East-



West imbroglia and dichotomy, what is required is an externalised and centric diplomacy and geopolitics in contradistinction to the extreme stances of belligerent nations. However, the liberal political underpinnings of some countries have the propensity to expansively influence bullying idiosyncrasies of world powers for tolerant diplomacy, geopolitics and international cooperation for sustainable global health, environment and security. It is imperative to achieve and maintain these goals because the world is more divided than ever. As stated supra, religiopolitical anarchists, militants, bandits, terrorists, separatists, and ultranationalists are increasing in dominance, popularity, influence and assertiveness, particularly in sub-Saharan Africa and EuroAsia. It is high time Nigeria and other LMICs realised that several developed countries are entrenched in diplomacy, geopolitics, international relationships and cooperations which categorically inculcate diplomacy and geopolitics in their identity, integrity, security social welfare and wellbeing as well as self-development with limited dependence or reliance on other countries in all spheres. A veritable, efficient strategy and policy for environmental protection as well as natural resource and biodiversity restoration are essential features for a sustainable society [54]. Global health diplomacy (GHD) may constitute the connection for international cooperation to prevent, harness or curb public health problems for equitable and sustainable development [55].

---

## 12. What we need to do

All institutions need to adopt and aim for success in their assignments for global security, health and environment which we hope can collectively drive our nations, sub-regions and regions to potent economic integration, political stability, and social harmony in the global community in terms of efficient and effective service delivery sustainable impact within the biosphere and human population. It is imperative to sustain the promotion of economic cooperation between States in order to augment living standards of citizens with resultant driving of economic development in an integrated perspective. All nations remain critically and substantially relevant to global aspirations. Issues and opportunities of inter-state cooperation, collaboration and harmonisation of policies, programme integration, security, conflict management and resolution within and among nations and sub-regions must be necessitated for solidarity and collective responses to global extant challenges, such as labour shortages, youth empowerment, climate change, terrorism, environment and health issues, good governance, restoration and sustainability of democracy fundamentally based on human rights and the rule of law. These will culminate in the growth, development and progress of our citizens via citizen participation, people-oriented programmes and projects which include effective advocacy around core issues of concerns with emphasis on development agenda 2050 [56], in the African Union Agenda 2063 [57], and the United Nations Sustainable Development Agenda 2030 [58]. Globally, it is pertinent to evolve appropriate conducive partnerships and working relationships among Development Partners to drive and optimise trajectories, opportunities and latitude for progress as adopted in the priorities set out in the Agenda [56-58] to function with member-States pursuant to their objectives; and engender in institutions the underpinnings of their national, sub-regional, continental and global functionalities.

It is argued that the uneasy calm triggered by the presence of the United States of America in Taiwan has exposed the fragility and delicate imbalance of the status quo in diplomacy, geopolitics and international cooperation. Retrospectively, on the stand-off in 1995-96, the United States of America, China and Taiwan have exhibited uneasiness following the ambiguities and contradictions within which transcontinental or global peace precariously embellishes itself. The world needs to impose a new balance to avoid war. On the levels of the extant global challenges and issues, there are perspicuous opportunities within our reach for convergence in overwhelming sustainable, restorative and harmonious spheres in global affairs.

This paper tends to argue the need for extensive and rigorous thematic and methodological approach in the analyses of diplomacy, geopolitics, international relationships and cooperation with particular emphasis inter alia on health, environment and security in both local and global paradigm. Rather than restricted mono-disciplinary strategies, there is an expedient and increasing latitude for integrative multidimensional or interdisciplinary mode of rethinking underpinning diplomacy and geopolitics for the future of humanity. Global efforts are pertinent to create, develop and enhance diplomacy, geopolitics, and international cooperation in security, environment and health for a shared future for all life. These are essential for the achievement of Sustainable Development Goals, eradicating the existential climate change threat, harnessing and curbing land degradation, creating and promoting food security and underpinning progress in trade, health and environment. A vast expanse of terrestrial, atmospheric and aquatic environment have undergone substantial alterations due to untoward natural and anthropogenic activities. We need to prevail on ourselves to terminate the unconscionable and intransigent disruption and dissipation of biodiversity by enabling resolutions for green and inclusive growth and development with awareness and understanding of issues, challenges and opportunities [59, 60]. What is imperative is the conceptual framework that enables ambitious and transformative change to be in convergence with our diplomacy, geopolitics, international relationships and cooperation to efficiently and effectively undergird nature by safeguarding our economy, health and environment in never-ending sustainable

diplomacy and geopolitics of local and global wild and cultivated terrestrial ecosystem cadastres, aquatic environment, promoting sustainable production and consumption of resources, application of nature-based resolutions to tackle climate change and adverse subsidies which compound environmental, health and security degradation. Irrespective of variations regarding values and regime.

---

### 13. Conclusion

It is imperative to undergird a formalised and interactive diplomacy and geopolitical world order. There must be an extant diplomacy and international accord for the mobilization of pecuniary resources for restoration and sustainability with expansive regard for justice, equity and human rights with particular reference to indigenous and vulnerable populations in a civilization devoid of war. The most critical geopolitical determination of the era is to place diplomacy at the pedestal, integrate cooperation globally on diverse challenges, such as COVID-19/SARS-Cov-2, climate change, water pollution and land degradation rather than belligerency between nations. These will aid nations for disease detection, preparedness, response and capacity building for global environmental and health security.

---

### Compliance with ethical standards

#### *Acknowledgments*

This study has not received any extraneous funding.

---

### References

- [1] Chukwuma Sr C. Perspectives in the emergence and re-emergence of infectious diseases, geopolitics and gain-of-function research. *Scholars International Journal of Biochemistry*. 2022. DOI:10.36348/sijb.2022.v05i01.001.
- [2] Chukwuma Sr C. The clinicopathological correlates of cystoisosporiasis in immunocompetent, immunocompromised and HIV-infected/AIDS patients but neglected in SARS-CoV-2/COVID-19 patients? *Int J Clin Microbiol Biochem Technol*. 2021; 4: 001-004. DOI: 10.29328/journal.ijcmbt.1001018.
- [3] Chukwuma Sr C. Environmental health perspectives on the emergence and re-emergence of infectious diseases, geopolitics and gain-of-function research. *Journal of Biomedical Research & Environmental Sciences*. 2021. DOI:10.37871/jbres1386.
- [4] Chukwuma Sr C. Explicating the presentations of *Acanthamoeba keratitis* with special concern in the COVID-19 pandemic ambient. *IJCMBT*. 2021; 4: 010. DOI: 10.29328/journal.ijcmbt.1001020.
- [5] Chukwuma Sr C. Challenges and opportunities in accessing veritable vaccines and curbing the dissemination and excesses of the SARS-CoV-2 or COVID-19 variants. *Middle East Publishers Scholars International Journal of Biochemistry*. 2021; 4(9): 108-111. DOI: 10.36348/sijb.2021v04i09.003.
- [6] Oberthür S. Where to go from Paris? The European Union in Climate geopolitics. *Global Affairs*. 2016; 2(2): 119-130, <https://doi.org/10.1080/23340460.2016.1166332>
- [7] Chukwuma Sr C. Geopolitical issues in health and biosecurity concerning gain-of-function research, emergence and re-emergence of infectious diseases. *International Journal of Clinical Virology*. 2022. DOI:10.29328/journal.ijcv.1001043.
- [8] Chukwuma Sr C. Ecological Analysis of the COVID-19 Pandemic. *Biomedical Research and Clinical Reviews*. 2021; 3(1); DOI:10.31579/2692-9406/032.
- [9] Chukwuma Sr C. Environmental issues and our chemical world - the need for a multi-dimensional approach in environmental safety, health and management. *Environ Manage & Hlth*. 1998; 9(2-3): 136-143: <https://doi.org/10.1108/09566169810222238>.
- [10] Lazard O, Youngs R. The EU and Climate Security: Toward Ecological Diplomacy. July 12, 2021. Carnegie.Publications. Youngs\_and\_Lazard\_EU\_Climate\_FINAL\_07.08.21.pdf.
- [11] Holzinger K, Knill C. The interaction of competition, co-operation and communication: Theoretical analysis of different sources of environmental policy convergence. *Journal of Comparative Policy Analysis Research and Practice*. 2008; 10(4): 403-425. DOI: 10.1080/13876980802468857.

- [12] Chukwuma Sr . Administrative policy and co-operative responsibility for environmental protection and sustainable development in Nigeria. *Int J Env Edu & Inf.* 1995; 14(4):393-404.
- [13] Chossudovsky EM. East-West diplomacy for environment in the United Nations: the High-Level Meeting within the Framework of the ECE on the Protection of the Environment : a case- study. UNITAR/ST/26 UNITAR. 1998; p. 243-247.
- [14] Chukwuma Sr C. Environment and development: A social evaluation survey in Nigeria in 1992. *Int J Env Edu & Inf.* 1994; 13(2): 183-208.
- [15] Chukwuma Sr C. Environmental impact assessment, land degradation and remediation in Nigeria: current problems and implications for future global change in agricultural and mining areas. *International Journal of Sustainable Development & World Ecology.* 2011; 18(1):36-42. <https://doi.org/10.1080/13504509.2011.543837>.
- [16] Chukwuma Sr C. Microsporidium in AIDS patients: a perspective. *East African Medical Journal.* 1996; 73(1): 72-75.
- [17] Chukwuma Sr C. Strategy for environmental impact assessment, planning and management of non-ferrous metal mining operations in Nigeria. *Environmental Conservation,* 1995; 22(3): 261-3. <https://doi.org/10.1017/50376892900010675>.
- [18] Chukwuma Sr C. Hunger in the COVID-19 pandemic. *IJARR.* 2020; 5(11): 20-23.
- [19] Chukwuma Sr C. Re-thinking poverty and health issues in the environment of the COVID-19 pandemic. *Int J AdvRes Rev, IJARR.* 2021; 6(1): 26-29.
- [20] Chukwuma Sr C. Strategy on poverty exacerbated by the COVID-19 pandemic. *IJCSRD.* 2021; 1(2): 105-107.
- [21] Chukwuma Sr C. Health concepts, issues and experience in Abakaliki area, Nigeria. *Environmental Health Perspectives.* 1994; 102(10): 854-56. DOI: 10.1289/ehp.94102854.
- [22] Chukwuma Sr C. Undergirding environmental legislation and citizen participation in developing countries. *Int J Env Edu & Inf.* 1996; 15(3):319-330.
- [23] The Cable. Buhari. How better cooperation on trade, security can make Commonwealth real global power. 2022. <https://www.thecable.ng/buhari-how-better-cooperation-on-trade-security-can-make-commonwealth-real-global-power/amp>.
- [24] Chukwuma Sr C. Ecosystem cadastre of plant-soil interactions with nonferrous metals. *IJCRCPS.* 2021; 8(6): 17-26. <http://dx.doi.org/10.22192/ijrcrps.2021.08.06.003>.
- [25] Chukwuma Sr C. Progress in the ascertainment of vaccines regarding SARS-CoV-2 during the COVID-19 pandemic and in the future. *Progress in Medical Sciences.* 2022; 6(2): 1-4. DOI: 10.5455/ pms.20221052.
- [26] Brown S. Diplomacy in *International Encyclopedia of the Social & Behavioral Sciences.* 2001. DOI: 10.1016/B0-08-043076-7/01260-2.
- [27] Cornago N. Diplomacy in *Encyclopedia of Violence, Peace, & Conflict (Third Edition).* 2022; 574-580 pp. DOI: 10.1016/B978-012373985-8.00050-7.
- [28] Chukwuma Sr C. Environmental health concepts and issues - A viewpoint. *Intern J Environ Studies.* 2001; 58:631-644.
- [29] Chukwuma Sr C. Defining environmental management and planning policy in Nigeria. *Int J Agric Med & Rural Hlth.* 1996; 20(1):13-18.
- [30] Chukwuma Sr C. Environment and Development: Approaches to strategies for the improvement of human well-being in Abakaliki area, Nigeria. *Environmental Conservation.* 1994; 21(4):359-61. <https://www.jstor.org/stable/44519013>. Corpus ID: 85703561. <https://doi.org/10.1017/S0376892900033695>.
- [31] Chukwuma Sr C. Paradigm on sustainable human health, environment and petroleum contamination: constraints and challenges. 2018. DOI: 10.20944/preprints2018.0044.v1.
- [32] Pereira JC (2015). Environmental issues and international relations, a new global (dis)order - the role of international relations in promoting a concerted international system. *Rev. bras. polit. int.* 2015; 58(1). <https://doi.org/10.1590/0034-7329>.

- [33] Keskinen M, Salminen E, Haapala J. Water diplomacy paths - An approach to recognise water diplomacy actions in shared waters. *Journal of Hydrology*. 2021; 602(1): 126737. <https://doi.org/10.1016/j.jhydrol.2021.126737>.
- [34] Chukwuma Sr C. To what extent for improved water supply? Editorial, *IJARBS*. 2020; 7(12): i-ii. DOI: 1022192/ijarbs.
- [35] Chukwuma Sr C. Environmental and social consequences of metals and mines on water. *Int J Env Studies*. 1998; 54(1A):73-81. <https://doi.org/10.1080/00207239808711140>.
- [36] Chukwuma Sr C. Development and implementation of environmental monitoring and information systems for water resources. *Environmental Management & Health*. 1998; 9(4):153-9. DOI: 10.1108/09566169810228908.
- [37] Chukwuma Sr C. Information and communication needs in the administration of ibuprofen in the treatment of symptoms in COVID-19 patients. *The Journal of Medical Research*. 2020; 6(4): 128-130. <https://doi.org/10.31254/jmr.2020.6405>.
- [38] Chukwuma Sr C. Information-Base and Determinants of Medical Specialization and Primary Care: A View Point, *JBAH*. 2014; Vol 4 No. 8.
- [39] Feldbaum H, Lee K, Michaud J. Global health and foreign policy. *Epidemiol Review*. 2010; 32(1): 82-92. DOI: 10.1093/epirev/mxq006.
- [40] Kickbrusch I, Liu A. Global health diplomacy- reconstructing power and governance. *Lancet*. 2022; 399(10341): 2156-2166. doi:10.1016/S0140-6736(22)00583-9.
- [41] Chukwuma Sr C, Bjurulf P. A case study of the information-base needed for effective evaluation of primary healthcare programmes in Anambra State, Nigeria. *Int J Hlth Sc*. 1990; 1(2):137-48.
- [42] Chukwuma Sr C. Probing the emergence and the re-emergence of infectious diseases, geopolitics and gain-of-function research. 2021. DOI: 10.36686/Ariviyal.CSER.2021.03.08.046.
- [43] Chukwuma Sr C. Paradigm for implementing sustainable modalities against the emergence and re-emergence of parasitoses and infectious diseases. *Applied Sciences Reports*. 2015; 9(3): 129-138. DOI: 10.15192/PSCP.ASR.2015.9.3.129138.
- [44] Kim DJ, Kim AJ. Global health diplomacy and North Korea in the COVID-19 era. *International Affairs*. 2022; 98(3): 915-932. <https://doi.org/10.1093/ia/iiac048>.
- [45] Chukwuma Sr C. Gain-of-function research and geopolitics in the emergence and reemergence of infectious diseases and microbiome variants. *IJCLS*. 2021. DOI; 10.21746/ijcls.2021.10.8:2.
- [46] Chukwuma Sr C. Cadmium, lead & zinc from terrestrial plants in the Enyigba-Abakaliki lead and zinc mine: search for a monitoring plant species in trace element distribution. *Bulletin Env Contam Toxicol*. 1993; 51(5): 665-671. <https://doi.org/10.1007/BF00201643>.
- [47] Chukwuma Sr C. Latent constraints for improved environmental health management in non-industrialised countries. *Environmental Management & Health*, 1905; 6(4):9-14. <https://doi.org/10.1108/09566169510091912>.
- [48] Manzanedo RD, Manning P. COVID-19: Lessons for the climate change emergency. *Sci Total Environ*. 2020; 742:140563. 10.1016/.scitotenv.2020.140563.
- [49] Chukwuma Sr C. Accessing vaccines with compliance to stem the emergence and dissemination of the SARS- CoV-2 or COVID-19 variants. eBook: *Research Trends of Microbiology*, MedDocs Publishers LLC. 2021; Volume 3, Chapter 2, pp 12-15. <https://bit.ly/3Cp663c>.
- [50] Chukwuma Sr. Environmental, developmental and health perspectives in Egypt. *Environmental Management & Health*. 1995; 6(1); 38-46. <https://doi.org/10.1108/09566169510078458>.
- [51] Chukwuma Sr C. Social welfare and population dynamics in Egypt with particular reference to the status of women. *Int J Env Edu & Inf*. 1995; 14(1): 45-62.
- [52] Cass L. *Global environmental politics - International relations*. 2019. DOI: 10.1093/OBO/9780199743292-0014.
- [53] Criekemans D. *Geopolitics and international relations grounding world politics anew*. Leiden; Boston: Brill Nijhoff. 2022; 381 p.
- [54] Chukwuma Sr C. Perspectives for a sustainable society. *Environmental Management & Health*. 1996; 7(5):6-20. <https://doi.org/10.1108/09566169610130377>.

- [55] Javed S, VK Chattu. Strengthening the COVID-19 pandemic response, global leadership, and international cooperation through global health diplomacy. *Health Promot Perspect.* 2020; 10(4): 300–305. DOI: 10.34172/hpp.2020.48.
- [56] Vision 2050. Nigeria as a developed nation. 2022. <https://www.blueprint.ng/vision-2050-nigeria-as-a-developed-nation/>.
- [57] African Union. Agenda 2063: The Africa We Want. 2022. <https://au.int/en/agenda2063/overview>.
- [58] United Nations. Transforming our World: The 2030 Agenda for Sustainable Development. 2022. <https://sdgs.un.org/2030agenda>.
- [59] Chukwuma Sr C. Convergence in diplomacy, geopolitics and international cooperation for human health and environment. *J Biomed Red Environ Sci.* 2022; 3(8): 895-904. DOI: 10.37871/jbres1529. Article ID:JEBRES1529. <https://www.jelsciences.com/articles/jbres1529.PDF>.
- [60] Chukwuma Sr C. Global concerns and affairs in environment and health. *Into Jr Infect Dis & Epidemiology.* 2022; 3(4): 1-8.