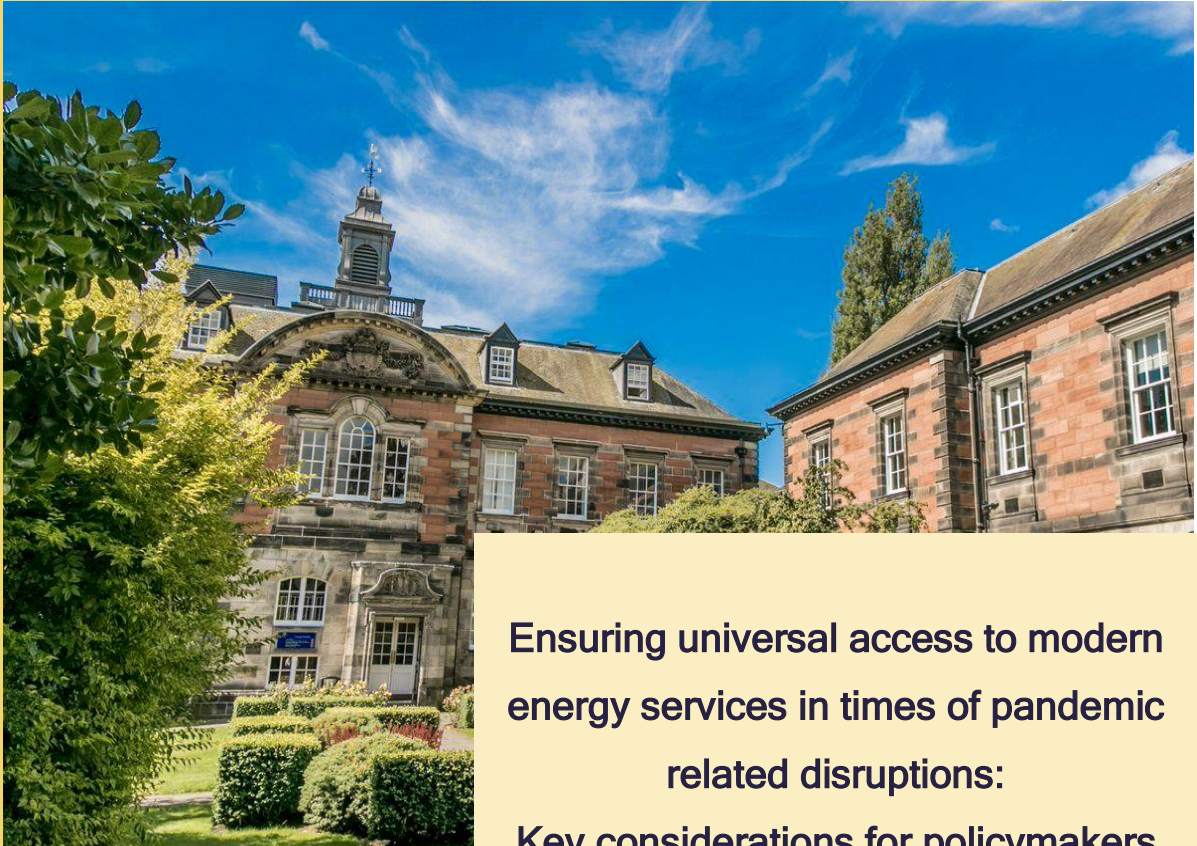




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**Ensuring universal access to modern energy services in times of pandemic related disruptions:
Key considerations for policymakers**

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1. EXECUTIVE SUMMARY

The significant disruptions to global energy markets across the world, in light of the Coronavirus Disease 2019 (COVID-19) pandemic, has shown that without robust law and governance frameworks to mitigate and manage pandemic-related disruptions to energy supply and demand, global efforts to achieve the United Nations Sustainable Development Goals may be stifled.

This research highlights the key issues for policymakers with respect to the legal and governance aspects of designing and implementing disaster risk reduction and resilience (DRRR) frameworks to ensure the security of energy supply and demand in times of pandemic related disruptions. In order to accelerate the restoration, stabilisation and consolidation of energy access programs and infrastructure in times of pandemics, countries will need to:

- Establish comprehensive laws and regulations on DRRR. As countries relax COVID-19 lockdown and emergency measures, comprehensive DRRR laws and policies are required to anticipate and prevent future energy shocks and disruptions, while also accelerating energy restoration and access in affected communities.
- Embrace technological innovation to improve data collection and cross-sectoral knowledge sharing.
- Prioritise investment in energy technologies and projects aimed at achieving both SDG 7 and SDG 13.
- Improve regional and bilateral co-operation. Energy integration and cooperation between countries can provide a platform for jointly addressing current threats and risks.

2. INTRODUCTION

The United Nations' Sustainable Energy for All and the associated Sustainable Development Goal (SDG) 7 encourage countries to develop projects and initiatives aimed at providing access to energy to the over 1 billion people who do not have access to reliable energy.¹ Access to modern energy such as electricity is crucial to addressing other global challenges such as poverty, famine and gender inequality.² Prior to the outbreak of the COVID-19 pandemic, the challenge of inadequate access to modern energy, or energy poverty, was already escalating in many parts of the world, especially in developing countries in Middle East and Sub-Saharan Africa (SSA).³ This challenge is anticipated to escalate due to growing energy demand resulting from geometric population growth; rise in urbanisation and industrialisation; technology gaps; oil price volatility and reduced levels of finance for energy projects; as well as rising impacts of climate change on energy infrastructure.⁴

Managing disruptive events, such as natural disasters and extreme weather events has been a central aspect of energy and natural resources law for several decades. The DRRR concept has been well espoused as a framework for promoting resilience to energy disruptions and threats in a timely and efficient manner while preserving and restoring critical and essential supply functions. However, as can be seen with COVID-19, unlike previously studied disruptive events that tend to have a defined geographical scope, pandemic related disruptions can adversely impact the entire global energy value chain at the same time, in the same manner, and can paralyze global energy demand and supply for prolonged and indeterminate periods.

The COVID-19 pandemic accentuates the need for innovative law and governance approaches that recalibrate the scope of energy disruptions, as well as anticipate, prevent and respond to such novel global impacts at local levels. Without integrating holistic DRRR frameworks into the energy access and decarbonization agenda, global efforts to achieve SDG 7, as well as SDG 13 relating to climate action, may be stifled. This article therefore examines the legal and governance aspects of designing and implementing DRRR frameworks to guarantee the security of energy supply and demand in times of pandemic related disruptions.

The article is organized into 3 sections, this introduction being the first. Section 2 examines specific legal and institutional challenges that arise with managing pandemic related disruptions. Section 3 gives the concluding remarks highlighting the key issues, lessons and recommendations for policymakers.

¹ SDGs UN. United Nations Sustainable Development Goals, 2015.

² Nalule VR. Energy Poverty and Access Challenges in Sub-Saharan Africa: The Role of Regionalism. Springer; 2018 Aug 27.

³ Olawuyi D. 'Energy Poverty in the Middle East and North African (MENA) Region: Divergent Tales and Future Prospects', in Inigo Del Guayo, Lee Godden, Donald N. United Nations, Transforming. 2020

⁴ del Guayo I, Godden L, Zillman DD, Montoya MF, González JJ, editors. Energy Justice and Energy Law. Oxford University Press; 2020 May 21: Nalule VR. Transitioning to a Low Carbon Economy: Is Africa Ready to Bid Farewell to Fossil Fuels?. In The Palgrave Handbook of Managing Fossil Fuels and Energy Transitions 2020 (pp. 261-286). Palgrave Macmillan, Cham.

3. IMPLEMENTATION BARRIERS: PANDEMIC-RELATED DISRUPTIONS DRRR FRAMEWORK

The significant energy disruptions witnessed across the world as a result of the COVID-19 pandemic show that extant DRRR frameworks may be insufficient to effectively address pandemic related disruptions to sustainable energy access. Main limitations include: absence of comprehensive legal frameworks on pandemic-related disruptions; existing gaps in knowledge; recourse constraints and institutional limitations. See discussion below:

(A) Incomplete legal frameworks on pandemic-related disruptions

Several studies predicted pandemics as unique threats that require innovative legal response measures.⁵ Albeit, pandemics are rarely mentioned in existing laws and regulations in energy markets across the world. For much of the last two decades, very few studies and institutions have measured, monitored, and reported on patterns of pandemic related disruptions to energy services. The result is that responses to the COVID-19 disruptions have been on short term and on a case-by-case basis.

Not only has this resulted in significant disputes and litigation, such emergency and reactive measures have not been adequate to provide a basis for developing adequate bounce back measures that would accelerate the recovery of energy markets from disruptions triggered by the pandemic, as well preventing impacts of future pandemics. For example, in Nigeria, the National Emergency Management Agency Act is the overriding legislation that establishes a DRRR framework in Nigeria. However, not only is the legislation silent on the definition of disasters, it focuses mainly on emergency disaster response and less on post-disaster reconstruction, or minimising long term impacts and recurrence.⁶ *In a bid to minimise disruptions to energy supply during the pandemic, the Nigerian Department of Petroleum Resources (DPR) released a directive that would allow oil and gas workers to work in offshore and remote locations in order to guarantee petroleum distribution and power generation activities. While these measures provide emergency response that minimise interruptions from the pandemic, they are not comprehensive enough to address long term reconstruction and recovery of the energy sector from the social, economic and environmental impacts of the pandemic.*

To effectively ensure reconstruction and recovery of energy markets to the impacts of COVID-19 disruptions, it is important to evolve coherent and transparent national legal frameworks and action plans on pandemic-related disruptions. Contextualizing the unique threats of pandemic related disruptions to energy systems at the domestic level, within a broader energy expansion strategy, will not only help to forestall loss of progress made with

⁵ OECD (2011). Future global shocks: Pandemics. Multi-Disciplinary Issues: International Future Program. OECD. 2011 April.

⁶ Mashi SA, Oghenejabor OD, Inkani AI. Disaster risks and management policies and practices in Nigeria: A critical appraisal of the National Emergency Management Agency Act. International journal of disaster risk reduction. 2019 Feb 1;33:253-65.

respect to energy transition and energy justice, but could also yield additional benefits that can promote the full realization of extant national visions on energy diversification, energy efficiency, and climate resilience.

(B) Existing gaps in knowledge: Risk anticipation and mitigation

For several of the natural, man-made and hybrid disasters, the triggers and impacts have been well studied and documented. Such increased knowledge on disasters have helped policy makers to develop pre-disaster measures that anticipate, prevent and reduce the occurrence, impacts, or frequency of disasters especially their impacts on energy infrastructure. However, with respect to pandemic-related disruptions, a clear and consistent coagulation of knowledge and best practices on their triggers, drivers, and whole range of their consequences may be some time away. As the OECD identified, there is an absence of ‘sufficient interoperable, globally shared information available in real-time about pandemic risk inventories, hazards or threat.’⁷ For example, with respect to COVID-19, the different levels of technical capacity and knowledge, as well as availability of testing, measurement and information monitoring infrastructure in urban and rural areas have made response planning difficult and largely incoherent at national, regional and international levels.

Existing gaps in knowledge does not however call for intellectual surrender. The precautionary principle of international law reinforces the notion that where there are threats of serious or irreversible environmental damage, countries should take preventive and risk-reduction measures even when knowledge is insufficient, inconclusive or uncertain.⁸ For example, with respect to climate change, Article 3(3) of the UNFCCC emphasizes the need for countries to take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects.⁹

(C) Institutional limitations

As can be learned from the COVID-19, unlike other forms of disasters that involve comparably limited and defined actors, addressing the impacts of pandemic related disruptions to energy services will require a wide range of actors and institutions across and beyond the energy value chain. For example, health institutions will be required to curb and limit the emergency.

COVID-19 raises the need for a comprehensive assessment of the formal mandates and roles of existing institutions to dismantle artificial bifurcations that hinder multi-stakeholder

⁷ OECD (2011). Future global shocks: Pandemics. Multi-Disciplinary Issues: International Future Program. OECD. 2011 April.

⁸ Olawuyi DS. The Principles of Nigerian Environmental Law. Afe Babalola University Press; 2015.

⁹ United Nations Framework Convention on Climate Change (Adopted 09 May 1992, in force 21 March 1994) 1771 UNTS 107; S. Treaty Doc No. 102-38; U.N. Doc.A/AC.237/18 (PartII)/Add.1; 31 ILM 849 (1992).

partnership, cooperation and information sharing. To foster institutional cooperation that is required to effectively address pandemics, there is a need to integrate information sharing and interoperability standards and systems across all key sectors. National authorities will need to increasingly adopt a one-institution and open information exchange architecture that interlinks data and information flow that is required by multiple agencies and departments to develop holistic responses.

At the international level, COVID-19 has shown that several of the energy security challenges facing our world, ranging from efficiency in supply and consumption; mitigation of environmental impacts; climate change; and addressing the resource curse challenge, amongst others are interconnected and are best addressed cooperatively by embracing regionalism and globalism.¹⁰

(D) Resource constraints

Restoring, stabilising and consolidating efforts to achieve universal energy access that have been affected by the COVID-19 pandemic, will require significant financial resources. As the World Bank projects, addressing the economic and social consequences of the pandemic 'will be made more difficult by empty government coffers.'¹¹ Similarly, studies show that about US\$90 trillion in infrastructure investment is needed globally by 2030 to achieve climate- smart infrastructure.¹²

COVID-19 pandemic has exacerbated the pre-existing balance of payments deficits and fiscal crisis across the MENA and SSA region and could impact energy access response, recovery and reconstruction efforts. For example, the International Monetary Fund has revealed that Nigeria currently has a low fiscal revenue base which has led to low debt-servicing capacity and limited funding for critical energy infrastructure such as electricity generation and transmission; oil and gas production and pipeline systems; liquefied natural gas facilities; coal transport trains; management technology such as advanced electricity metering and distribution systems; and modern power plant control systems and smart building technologies.

¹⁰ Nalule VR. Energy Poverty and Access Challenges in Sub-Saharan Africa: The Role of Regionalism. Springer; 2018 Aug 27.

¹¹ World Bank. Coping with a Dual Shock: COVID-19 and Oil Prices. World Bank. 2020. Can be accessed at <https://www.worldbank.org/en/region/mena/brief/coping-with-a-dual-shock-coronavirus-covid-19-and-oil-prices>

¹² Rydger, J., Jacobs, M. and Granoff, I., 2015. Ensuring new infrastructure is climate-smart. *Contributing paper for Seizing the Global Opportunity: Partnerships for Better Growth and a Better Climate. New Climate Economy, London and Washington, DC.*

4. CONCLUDING REMARKS AND FUTURE DIRECTIONS FOR POLICYMAKERS

The COVID-19 pandemic has tested the efficacy and relevance of extant DRRR legislation and strategies to effectively respond to sudden, widespread, global and indeterminate risks associated with pandemic related energy disruptions. While extant DRRR legal frameworks have provided emergency measures to stem the impacts of COVID-19 on energy systems, detailed and comprehensive legal responses will be required to provide pre-pandemic measures that anticipate, measures and responds to future pandemic disruptions, as well as post-pandemic measures that accelerates energy restoration, stabilisation and consolidation of progress made with respect to energy transition and energy justice.

Lessons learned from COVID-19 show the importance of an integrative and multicentric approach to designing and implementing holistic DRRR framework for pandemic related disruptions to energy access. However, to ensure that an integrative response framework for pandemic related disruptions moves from theory to successful practical integration and adoption, fragmented legal structures and sector-based programs that stifle the development and application of hybrid and linked rules, procedures and processes across the sectors will have to be comprehensively addressed.

5. WORKS CITED

1. del Guayo I, Godden L, Zillman DD, Montoya MF, González JJ, editors. Energy Justice and Energy Law. Oxford University Press; 2020 May 21.
2. Mashi SA, Oghenejabor OD, Inkani AI. Disaster risks and management policies and practices in Nigeria: A critical appraisal of the National Emergency Management Agency Act. *International journal of disaster risk reduction*. 2019 Feb 1;33:253-65.
3. Nalule VR. Energy Poverty and Access Challenges in Sub-Saharan Africa: The Role of Regionalism. Springer; 2018 Aug 27.
4. Nalule VR. Transitioning to a Low Carbon Economy: Is Africa Ready to Bid Farewell to Fossil Fuels?. In *The Palgrave Handbook of Managing Fossil Fuels and Energy Transitions 2020* (pp. 261-286). Palgrave Macmillan, Cham.
5. OECD (2011). Future global shocks: Pandemics. Multi-Disciplinary Issues: International Future Program. OECD. 2011 April.
6. Olawuyi D. 'Energy Poverty in the Middle East and North African (MENA) Region: Divergent Tales and Future Prospects', in Inigo Del Guayo, Lee Godden, Donald N. United Nations, Transforming. 2020
7. Olawuyi D, 'Sustainable Development and Water-Energy-Food Nexus: Legal Challenges and Emerging Solutions' (2020) 103 (1) *JOURNAL OF ENVIRONMENTAL SCIENCE & POLICY* (Elsevier, London) <https://doi.org/10.1016/j.envsci.2019.10.009>
8. Olawuyi D. *The Principles of Nigerian Environmental Law*. Afe Babalola University Press; 2015.
9. Rydge, J., Jacobs, M. and Granoff, I., 2015. Ensuring new infrastructure is climate-smart. *Contributing paper for Seizing the Global Opportunity: Partnerships for Better Growth and a Better Climate. New Climate Economy, London and Washington, DC*.
10. SDGs UN. United Nations Sustainable Development Goals, 2015.
11. United Nations Framework Convention on Climate Change (Adopted 09 May 1992, in force 21 March 1994) 1771 UNTS 107; S. Treaty Doc No. 102-38; U.N. Doc.A/AC.237/18 (PartII)/Add.1; 31 ILM 849 (1992).
12. World Bank. Coping with a Dual Shock: COVID-19 and Oil Prices. World Bank. 2020. Can be accessed at <https://www.worldbank.org/en/region/mena/brief/coping-with-a-dual-shock-coronavirus-covid-19-and-oil-prices>

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