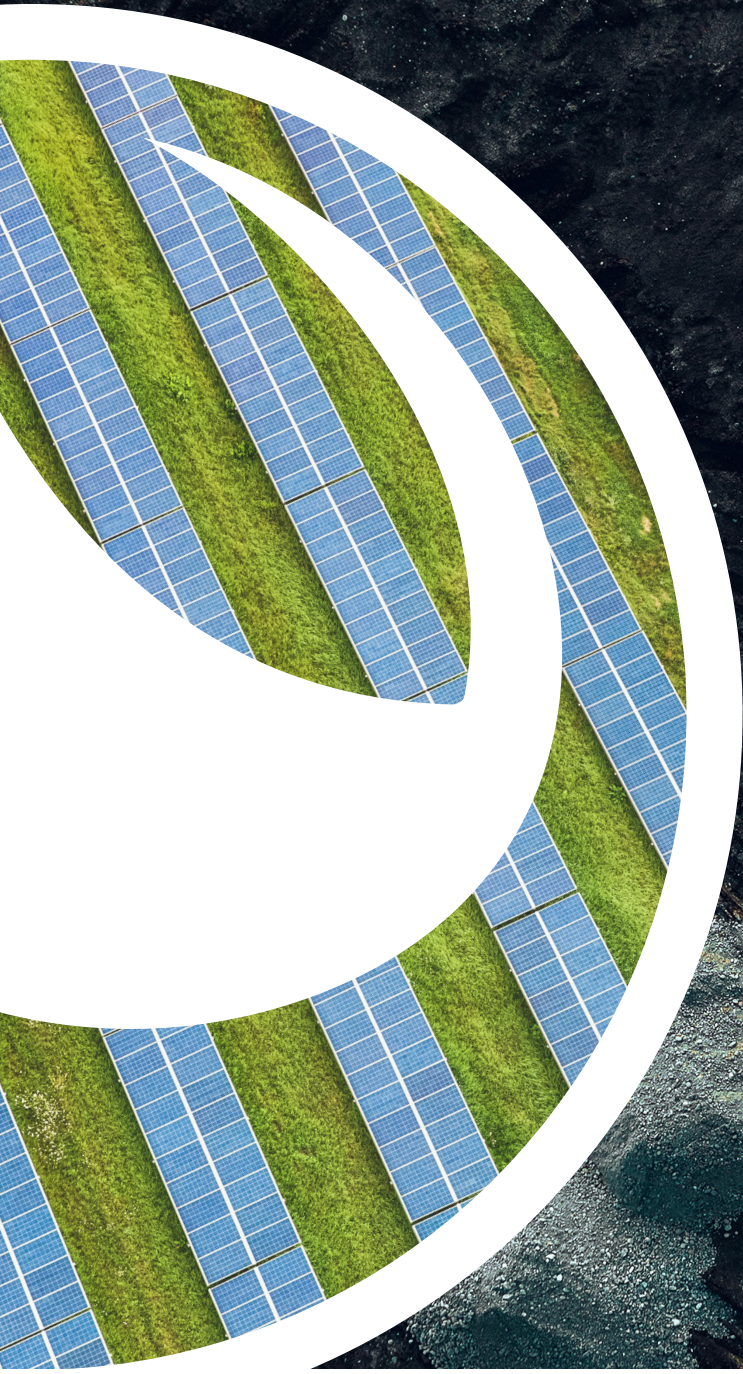


Reassessing Coal in Islamic Finance: Ethical Imperatives for Divestment and Sustainability



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ISFI is a pioneering partnership between the Global Ethical Finance Initiative (GEFI), Islamic Finance Council UK (UKIFC), HSBC Middle East, and Greenpeace MENA. It is designed to empower Islamic finance to lead the transition towards a sustainable and inclusive future.

Against the backdrop of COP28 and the associated transformative regional pledges including the UAE Banks Federation's AED 1 trillion commitment to sustainable finance, ISFI seeks to build the ecosystem for Islamic sustainable finance through a structured systematic programme that focuses on practical market issues. The programme's core elements include tailored capacity building, industry round tables, thought leadership papers and reports and market landscape analysis.

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Executive Summary

This paper draws upon parallels between the jurisprudential treatment of tobacco and the ethical considerations surrounding coal, focusing on the re-evaluating Islamic finance screening methodologies. The principles of Islamic finance are rooted in the ethical foundations of *maqāṣid al-sharī'ah* (objectives of Islamic law), which uphold sustainability, social responsibility, and the preservation of life, wealth, and the environment. Central to these objectives are *ḥifz al-nafs* (protection of life) and *ḍarar* (prevention of harm). Tobacco stands as a defining example of how Islamic law evolves in response to evidence of harm, moving from permissible to *ḥarām* (prohibited) once conclusive medical evidence is established and scholarly consensus reached.

Coal now presents a comparable ethical dilemma. Applying the same evidentiary logic is applied, contemporary public-health data demonstrate a comparable record of harm. Air pollution is a leading environmental risk factor for premature mortality, with approximately 6.7 million deaths each year attributable to exposure across all sources [WHO, 2023], and when analysis isolates fossil-fuel sources, the estimate rises to approximately 8.7 million deaths per year [Vohra et al., 2021]. Across multiple models and methods, the conclusion holds: the mortality burden is severe [Lelieveld et al., 2023].

Coal is repeatedly identified as the single largest fossil-fuel contributor to this toll, owing to its high emissions of fine particulates, sulphur dioxide, nitrogen oxides and mercury. While no single universally accepted global estimate exists, modelling studies consistently link coal to millions of premature deaths each year, alongside chronic respiratory disease, cardiovascular disorders and impaired child development, with disproportionate impacts on vulnerable groups [Finkelman et al., 2021; Henneman et al., 2023; HEAL, 2021]. In public-health terms, this burden is of the same order of magnitude as tobacco's global toll, at more than 8 million deaths annually [WHO, 2020].

Unlike tobacco, however, coal's harms extend beyond direct health effects to include cascading and intergenerational risks, coupling mortality and morbidity with accelerating climate change and ecological degradation. As the most polluting and carbon-intensive fossil fuel, it accounted for approximately 41 per cent of global energy-related CO₂ emissions in 2024 [IEA, 2025], and it imposes wide-ranging economic costs, including infrastructure damage, rising healthcare expenditures, reduced productivity and long-term fiscal instability [World Bank, 2022].

The Mortality Cost of Carbon (MCC) offers a further perspective, quantifying temperature-related mortality per gigaton of CO₂. Under established scenarios, MCC-based modelling indicates that present-day annual coal emissions correspond to substantial temperature-related excess mortality over the remainder of the 21st century. These temperature effects are additional to air-pollution mortality, reinforcing rather than overlapping with the health impacts outlined above [Bressler, 2021; Greenpeace, 2023].¹ Together, these impacts pose risks to public health, ecosystems and global stability.

Against this backdrop, this paper explores whether coal should, under defined conditions, be re-examined for permissibility within Islamic finance screening methodologies. It applies *ijmā'* (scholarly consensus), *qiyās* (analogical reasoning), *maṣlaḥah mursalah* (public interest), and *darūrah* (necessity) to scientific, ecological, and economic evidence, considering implications for alignment with the tobacco precedent, and limiting any exceptions to clearly defined caveats.

To support this assessment, a structured *darūrah* scorecard is introduced to guide scholars, *fatwā* councils, and financial institutions in determining when coal use may be temporarily tolerated, phased down, and when it must be phased out and prohibited outright. Where *darūrah* is invoked, dispensations must be time-bound, transparently justified, and accompanied by credible transition strategies informed by *tadarruj* (gradualism).

The paper also considers how Islamic finance can operationalise this ethical transition through instruments such as green *ṣukūk*, ESG-compliant investment funds, and blended finance models. Case studies from Malaysia, Pakistan, Indonesia, the United Arab Emirates, Saudi Arabia, and Central Asia illustrate how Islamic finance is already mobilising resources for sustainable infrastructure and energy transitions.

Finally, the paper calls for advancing Islamic finance screening standards through coordinated action by the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI), the Islamic Financial Services Board (IFSB), the OIC Fiqh Academy, and other relevant bodies. These institutions are encouraged to integrate phased coal exclusions into standards, promote sustainable instruments, and implement policy mechanisms that support equitable energy transitions.

Additivity assumption: In this paper we treat air-pollution mortality and temperature-related mortality as additive (i.e., non-overlapping) under conservative assumptions.

By aligning investment practices with Islamic legal reasoning, the paper invites further analysis towards the issuance of a formal fatwā (legal ruling) to clarify the classification of coal, identifying where it could be considered as ḥarām, with narrowly defined exceptions permissible only under demonstrable darūrah conditions and subject to transparent transition plans.

In doing so, the Islamic finance industry will demonstrate that its screening methodology reflects the latest scientific understanding, reaffirm its ethical distinctiveness, and play a decisive role in shaping a just and sustainable future. This position is further reinforced by both institutional guidance and scholarly opinion. The Central Bank of the United Arab Emirates, through its Guiding Principles Regarding Islamic Sustainable Finance (2024), has positioned Islamic finance as a central pillar of the country's sustainable finance agenda, highlighting its role in directing capital towards the transition. Echoing this perspective, Dr. Mohamed Ali Elgari, a leading scholar of Islamic finance and former member of multiple Sharī'ah boards, has stated: "I have no doubts that Islamic principles can have a positive impact in the global transition to a more sustainable and equitable economy. I urge the Islamic finance industry to embrace the opportunities that lie ahead and to work collaboratively in the ESG finance space to create a more sustainable future for all" (Elgari, n.d.).

1. Introduction

The Islamic finance industry continues to demonstrate strong, resilient growth, and broader global adoption in both Muslim and non-Muslim majority nations. In several jurisdictions, Islamic assets exceed 30 per cent of domestic financial system assets, and leading market outlooks project total industry assets at USD 9.7 trillion by 2029 [ICD/ LSEG 2025]. As global concern over climate change, ecological degradation, and public health intensifies, questions of sustainability have become central to financial practice. Within this context, the maqāṣid al-sharī'ah (objectives of Islamic law) provide a jurisprudential foundation that connects ethical imperatives to financial governance. Classical jurists identified the protection of life (ḥifẓ al-naḥs), wealth (ḥifẓ al-māl), intellect (ḥifẓ al-'aql), religion (ḥifẓ al-dīn), and lineage (ḥifẓ al-nasl). Contemporary scholarship has extended these objectives to include the protection of the environment (ḥifẓ al-bī'ah) [al-Ghazālī, al-Mustaṣfā; al-Shāṭibī, al-Muwāfaqāt]. By embedding these objectives within financial systems, Islamic law provides both a moral compass and a framework capable of responding to contemporary harms.

The adaptability of Islamic jurisprudence (fiqh) is well illustrated by the case of tobacco. When it entered Muslim societies in the sixteenth century, it was widely debated and often classified as makrūh (discouraged) in the absence of medical evidence. By the twentieth century, with overwhelming scientific proof of its harms, major institutions including al-Azhar, the Islamic Fiqh Academy, and the World Muslim League reached ijma' that smoking contravenes the objectives of the sharī'ah. This trajectory demonstrates that permissibility is conditional, and that rulings evolve in light of new knowledge and evidence of harm.

Coal presents an even more pressing test for the responsiveness of Islamic law and the integrity of Islamic finance. Its combustion remains the single largest source of global energy-related CO₂ emissions [IEA, 2025], a leading driver of climate change and a major contributor to air pollution, responsible for millions of premature deaths each year [WHO, 2023; Vohra et al., 2021]. Beyond health, coal imposes vast economic burdens, with global pollution-related costs estimated at over USD 8 trillion annually [World Bank, 2022]. Taken together, the extensive health burdens and the broader cumulative economic harms raise fundamental questions for the permissibility of coal financing under the sharī'ah, challenging scholars and practitioners alike.

In light of the latest medical and scientific evidence, this paper therefore asks: what lessons can the prohibition of tobacco offer for evolving rulings in Islamic law? How does coal present harm to life using a similar analysis as applied to tobacco through qiyās (analogical reasoning)? What are the broader implications of the harm coal has on the environment, and future generations in ways that engage the maqāṣid? What responsibilities do Islamic financial institutions bear in addressing these harms, particularly in Muslim-majority economies reliant coal? Under what conditions may claims of darūrah be upheld, without undermining the principle of tadaruj? Most importantly, how should these insights inform updates to sharī'ah screening methodologies so that Islamic finance excludes industries that cause systemic harm, while actively supporting ethical and sustainable alternatives?

By addressing these questions, the paper contributes to the evolving jurisprudence of harm and aims to support scholars, regulators, and practitioners in advancing a more context-sensitive and ethically coherent framework for Islamic finance.

2. The Evolution of Ḥarām Rulings in Islamic Jurisprudence

2.1 Methodological Foundations of Ḥarām Rulings

Islamic jurisprudence (fiqh) employs a principle-based methodology to determine when an act or substance should be deemed ḥarām. This framework draws upon multiple interrelated sources of authority, which together ensure doctrinal integrity while allowing adaptability in response to new evidence and circumstances [al-Ghazālī, al-Mustaṣfā; al-Shāṭibī, al-Muwāfaqāt].

- **Qurʾān and Hadith:** provide explicit prohibitions and ethical imperatives, forbidding intoxicants and gambling (5:90; 2:219) and enjoin the protection of life (2:195), justice (ʿadl), and the prevention of harm (ḍarar) (17:26–27; 7:56).
- **Ijmāʿ** (scholarly consensus): represents the collective agreement of qualified jurists, as seen in the twentieth-century consensus on the prohibition of ribā (interest) [Kamali, 2003].
- **Qiyās** (analogical reasoning): extends rulings to new cases by identifying a shared effective cause (ʿillah). The prohibition of narcotics, for example, is derived by analogy with alcohol, since both impair intellect.
- **Maqāṣid al-sharīʿah:** function as a higher-order compass, ensuring rulings remain aligned with overarching objectives, including the protection of the environment in contemporary scholarship [Auda, 2008].
- **Ḍarar:** encapsulated in the maxim *lā ḍarar wa lā ḍirār* [Sunan Ibn Mājah, 2340], prohibits actions that cause injury to individuals or society.

2.2 The Prohibition of Tobacco: A Precedent for Adaptability

The historical treatment of tobacco illustrates how sharīʿah rulings evolve in response to new evidence of harm.

- **Early ambiguity:** Tobacco entered Muslim societies in the sixteenth century through European trade with the Ottoman Empire, Persia, and the Indian subcontinent [Commins, 1990; Proctor, 2012]. In the absence of empirical evidence about its effects, jurists debated its status. Many Ḥanafī and Mālikī scholars treated it as *makrūh* (discouraged) rather than ḥarām, often drawing analogies with stimulants such as coffee [Akasheh, 2001]. This leniency reflected the epistemological limits of the era and allowed tobacco to gain widespread acceptance.
- **Scientific discovery:** By the late nineteenth and early twentieth centuries, medical research had established that tobacco is a major cause of lung disease, cardiovascular disorders, and addiction [Proctor, 2012]. Scholars began reassessing its permissibility using the maxim *lā ḍarar wa lā ḍirār*. Muḥammad ʿAbduh (d. 1905), the Grand Mufti of Egypt, argued that smoking should be prohibited once evidence of harm was clear [Commins, 1990].
- **Consensus and institutional fatāwā:** By the latter half of the twentieth century, overwhelming evidence had generated *ijmāʿ* on the impermissibility of tobacco. Key rulings included:
 - Al-Azhar University (1960s) declared smoking ḥarām for violating the *maqāṣid al-sharīʿah*, particularly ḥifẓ al-naḥs.
 - Saudi Arabia’s Permanent Committee for Fatwā (1980s–1990s), which classified tobacco as a “slow poison” and a moral transgression.
 - The Islamic Fiqh Academy and World Muslim League (2000s), which issued unanimous rulings condemning tobacco in all forms, framing addiction as a form of enslavement that contravenes bodily stewardship and societal welfare [Islamic Fiqh Academy, 2019; Al-Azhar Fatwa Department, 2020].

This consensus reflected the adaptive nature of fiqh, whereby once-tolerated practices were reclassified in light of new evidence of harm. Whilst some jurists treated it as *makrūh* and others as ḥarām the Islamic finance industry took the blanket position of ḥarām using the OIC Fiqh Academy approach.

Impact on Islamic Finance: The prohibition of tobacco reshaped financial governance, meaning that no financing (bank finance or investment) was permitted to be given to the sector. It was classified as part of the “sin sectors” alongside pornography, alcohol, gambling, and others:

- **Investments:** Islamic indices such as the Dow Jones Islamic Market Index, FTSE Sharīʿah Index, and S&P 500 Sharīʿah Index excluded tobacco companies [Dow Jones Islamic Market Index Guide, 2023; FTSE Russell, 2022; S&P Global, 2022].

- **Banking:** Islamic banks prohibited financing for tobacco-related businesses.
- **Insurance (Takāful):** Takāful operators excluded tobacco-related firms or imposed higher premiums for smokers.
- **Public policy:** Muslim-majority states introduced taxes, advertising restrictions, and smoke-free laws aligned with juristic rulings.

The case of tobacco demonstrates that permissibility under the sharī'ah is conditional and can be withdrawn when practices violate the objectives of protecting life, wealth, and community welfare.

2.3 Implications for Contemporary Screening

The tobacco precedent highlights three enduring lessons for Islamic finance:

1. Once grounded in sufficient evidence, rulings prioritise the prevention of harm and preserve ḥifẓ al-nafs.
2. Consensus catalyses systemic reforms across finance, by embedding new prohibitions into screening criteria.
3. Industries once tolerated, but later shown to be harmful can be categorically excluded without undermining economic development or innovation.

Coal therefore presents a test of coherence. If tobacco was declared ḥarām once its harms were established, then the continued permissibility of coal, despite overwhelming evidence of its devastating impacts, risks undermining the ethical authority of the sharī'ah. The following sections apply this logic to coal, assessing whether its harms justify a level of prohibition and what this implies for Islamic finance screening methodologies.

3. The Case Against Coal in Islamic Law

Coal presents one of the most urgent ethical dilemmas for Islamic finance. Despite the availability of alternative energy sources, its continued expansion in several muslim-majority economies heightens exposure to climate change, degrades ecosystems, and imposes significant economic and social costs. These cumulative harms directly engage the objectives of the sharī'ah, particularly ḥifẓ al-nafs, ḥifẓ al-māl, and ḥifẓ al-bī'ah. Detailed empirical data and country-level modelling are presented in Annex 2.

3.1 Coal's Impact on Public Health

Coal poses far-reaching and multidimensional threats to human health. Its combustion releases a range of toxic pollutants, including fine particulate matter (PM_{2.5}), sulphur dioxide (SO₂), nitrogen oxides (NO_x), and heavy metals such as mercury. Exposure to these pollutants is closely associated with chronic respiratory disease, cardiovascular disorders, strokes, and several forms of cancer [WHO, 2023; Finkelman et al., 2021].

The World Health Organization estimates that air pollution from both ambient and household sources is responsible for approximately 6.7 million premature deaths each year worldwide [WHO, 2023]. Recent studies attribute around 5.1 million deaths annually (3.6–6.3m) to ambient PM_{2.5} exposure from fossil fuels [Lelieveld et al., 2023], with earlier modelling placing the fossil-fuel toll at approximately 8.7–10.2 million [Vohra et al., 2021]. Within this total, coal-derived PM_{2.5} demonstrates higher toxicity: in the United States, emissions from coal-fired power plants were linked to approximately 460,000 deaths between 1999 and 2020 and carried more than twice the mortality risk of PM_{2.5} from non-coal sources of air pollution [Henneman et al., 2023]. For comparison, the World Health Organization estimates tobacco-related deaths at more than 8 million each year [WHO, 2020; IARC, 2020]. Taken together, these figures demonstrate that coal's health burden is on a comparable scale to tobacco and underline the extent to which fossil fuel emissions are the most readily controllable source of PM_{2.5} pollution, offering immediate public health gains through divestment and transition.

6.7M

Estimated annual premature deaths caused by air pollution

8M+

Deaths annually from tobacco — comparable to coal's toll

2x

Higher mortality risk from coal PM_{2.5} than other air-pollution sources

While the overall mortality burden of coal is vast, these harms are not distributed evenly. Vulnerable groups, including children, the elderly, pregnant women, and low-income communities face disproportionately high risks. Pregnant women exposed to coal pollutants experience increased rates of preterm birth, low birth weight, and developmental impairments in their infants [Landrigan et al., 2018]. Other long-term effects include impaired lung function, reduced resistance to infection, and neurological damage that may hinder educational attainment and future prospects [UNICEF, 2016].

This inequity is starkly visible in large urban centres with significant Muslim populations, notably, Delhi and Lahore, which rank among the world's most polluted cities, with average PM_{2.5} levels several times higher than WHO safety thresholds [IQAir, 2024; WHO, 2023]. During peak smog episodes, hospitals report surges in respiratory illness and schools are forced to close, underscoring the tangible and immediate risks of coal-driven air pollution for millions of people.

Such widespread and preventable suffering is fundamentally incompatible with the ethical mandate of *ḥifẓ al-nafs*, reflecting systematic violations of the obligation to preserve life, and raising profound questions of distributive justice and intergenerational equity, reinforcing the case for reform grounded by the principle of *ḍarar*.

3.2 Coal and Environmental Destruction

Beyond its human toll, coal is the most carbon-intensive fossil fuel and the single largest source of energy-related CO₂, the greenhouse gas that is the leading driver of climate change [IPCC, 2021]. In 2024, fossil CO₂ emissions were approximately 37.4 Gt, with coal accounting for approximately 41 per cent of the total [Global Carbon Budget, 2024]. Atmospheric concentrations of CO₂ now exceed 420 parts per million, more than 50 per cent above pre-industrial levels, bringing the planet closer to ecological tipping points [IPCC, 2023].

Coal mining and combustion also release an estimated 42 million tonnes of methane each year [IEA, 2025], roughly 12 per cent of global energy-related methane, including emissions from active operations and nearly 5 Mt from abandoned mines. These findings highlight coal's dual contribution to both long-term climate disruption and near-term warming.

In addition to its emissions profile, coal exerts immense pressure on freshwater resources. Across its life cycle, from extraction and washing to combustion and waste management, it remains one of the most water intensive industrial processes globally. In 2013, the coal industry consumed approximately 22.7 billion cubic metres (bcm) of freshwater, equivalent to the basic needs of more than one billion people [WRI, 2013]. Almost half of all existing and planned coal-fired power plants are located in areas facing high to extremely high levels of water stress [WRI, 2019]. In some regions, aquifers are being depleted at rates exceeding their natural replenishment, threatening intergenerational water security.

Whilst most of the cumulative atmospheric CO₂ emissions have historically been produced by developed nations, particularly North America and Europe [IPCC, 2023], many emerging economies and Muslim-majority countries now face some of the worst impacts of climate warming. In recent years, Pakistan's 2022 floods affected more than 33 million people and caused damages and economic losses estimated at about USD 30 billion [Government of Pakistan et al., PDNA, 2022; World Bank, 2022], whilst prolonged droughts in the Horn of Africa have placed over 20 million people at risk of severe food insecurity [UNOCHA, 2023].

Islamic teachings place strong emphasis on stewardship of the environment. The Qur'ān provides a clear moral directive against ecological destruction: "And do not cause corruption upon the earth after its reformation" (Qur'ān 7:56). Coal's role in driving ecological imbalance and resource depletion places it squarely in opposition to this command, making its continued permissibility inconsistent with *ḥifẓ al-bī'ah* and the principle of *maṣlaḥah*.

41%

Of fossil CO₂ emissions
come from coal

37.4 Gt

Global CO₂ emissions from
fossil fuels and industry

12%

Coal mining's share of
worldwide energy-sector
methane emissions

3.3 The Economic and Social Harm of Coal

Coal also imposes extensive economic and social costs. The World Bank estimates that health damages from air pollution amount to USD 8.1 trillion annually, roughly 6.1 per cent of global GDP (2019), with the burden falling disproportionately on low- and middle-income countries [World Bank, 2022]. These losses include escalating healthcare expenditures, reduced productivity, and wide macroeconomic pressures, which in coal-reliant economies constrain social spending and diversification. Beyond health, coal driven emissions amplify extreme events and systemic risks, adding further infrastructure costs. Coal's entrenched role in energy systems compounds these impacts by perpetuating dependence on a high-externality fuel.

A significant proportion of global coal expansion is now concentrated in Muslim-majority economies. Of the fifteen countries continuing to invest heavily in new coal-fired power infrastructure, more than one third are Muslim-majority states, including Indonesia, Pakistan, Bangladesh, Türkiye, Kazakhstan, and Kyrgyzstan [Carbon Brief, 2023; GEM, 2024]. This trajectory compels a critical ethical question: can Islamic finance continue to support coal when it demonstrably undermines both planetary stability and communal welfare?

USD 8.1T

Global health damages from air pollution per year

1/3

Of the 15 coal-expanding countries are Muslim-majority states

3.4 Implications for Islamic Law

Taken together, coal's health, environmental, and economic harms elevate it from a policy concern to a matter of sharī'ah integrity. They engage multiple objectives of the maqāṣid al-sharī'ah: ḥifẓ al-nafs through avoidable mortality, ḥifẓ al-māl through trillions in economic losses, and ḥifẓ al-bī'ah through its role in climate disruption and resource depletion. The evidence is no longer marginal or speculative but overwhelming and conclusive.

Whereas tobacco was reclassified as ḥarām once its harms were established beyond doubt, coal today arguably presents an even greater threat: systemic, global, and intergenerational. Maintaining its continued permissibility risks undermining the coherence of Islamic legal reasoning and the credibility of Islamic finance.

4. Drawing Parallels Between Tobacco and Coal

4.1 Scientific Consensus and Islamic Rulings

The prohibition of tobacco provides a clear precedent for how the sharī'ah responds to empirical evidence of harm. Initially regarded as permissible or makrūh, tobacco was reclassified as ḥarām in the twentieth century once scientific research confirmed its causal links to disease, premature death, and addiction, and scholarly consensus was established.

Coal presents an analogous case. As outlined in Section 3, its combustion is a major cause of premature mortality, the most carbon-intensive fossil fuel, and a principal driver of climate change. To prohibit tobacco while permitting coal introduces a doctrinal inconsistency. Both are non-essential, cause widespread harm, and violate the maqāṣid al-sharī'ah, particularly ḥifẓ al-nafs, ḥifẓ al-bī'ah, and ḥifẓ al-māl.

4.2 The Four-Element Qiyās Framework Applied

Islamic analogical reasoning (qiyās) requires four essential components: an original case (aṣl), an established ruling (ḥukm), an effective cause ('illah), and a new case (far') to which the ruling is extended.

1. Original case (aṣl):

Tobacco, which was ultimately classified as ḥarām on the basis of ijma' and institutional rulings.

2. Established ruling (ḥukm):

The prohibition of tobacco, grounded in overwhelming evidence of harm and scholarly consensus.

3. Effective cause ('illah):

Its causally evidenced harm, including systematic violation of ḥifẓ al-nafs through disease and premature mortality, addiction leading to waste (isrāf), and disproportionate harm to vulnerable groups.

4. New case (far’):

Coal, which shares, and in key respects, amplifies this ‘illah. The proposed ḥukm is therefore prohibition, subject only to narrowly defined and temporary exceptions under darūrah.

The analogy is supported by extensive evidence already outlined in Section 3: air pollution from coal combustion causes millions of premature deaths, climate mortality is quantifiable through the Mortality Cost of Carbon [Bressler, 2021], methane emissions intensify near-term warming, and the burdens fall disproportionately on vulnerable populations. Taken together, these harms establish a causally evidenced ‘illah sufficient to extend the prohibition applied to tobacco to the case of coal.

Indonesia illustrates how entrenched practices can blunt the authority of rulings. Despite high religiosity, more than 70 per cent of Indonesian men smoke, and many fatāwā continue to classify tobacco as makrūh rather than ḥarām [Pew Research Center, 2019]. This example shows that behavioural outcomes are shaped not only by jurisprudence but also by regulatory, social, and economic measures. It follows that coal prohibition must likewise be reinforced by broader principles of maṣlaḥah, intergenerational justice, and climate-specific harms to ensure both ethical authority and practical impact. Any claim of necessity would therefore need to be narrowly delimited and temporary, a matter addressed in Section 5.

4.3 Addressing Objections

Several objections are commonly raised against applying the tobacco precedent to coal. Addressing them is essential to ensure that the jurisprudential reasoning remains both rigorous and contextually sensitive. In most cases, claims of necessity are either overstated or, at most, justify temporary dispensations under darūrah.

Coal as essential for economic growth:

It is argued that coal underpins industrialisation, employment, and fiscal revenues. Yet Islamic law requires that earnings derive from sources that are both ḥalāl and ṭayyib. Given coal’s proven harms to life and environment, it fails to meet this standard. Furthermore, renewable energy technologies are now widely available and increasingly cost-competitive, undermining the claim that coal remains structurally indispensable.

Coal for energy access:

In regions experiencing energy poverty, decentralised renewable solutions can deliver reliable electricity without the harms associated with coal. Domestic coal use, such as for cooking or heating in poorly ventilated homes, mirrors the tobacco analogy, where users are also those directly harmed. Industrial coal use, by contrast, creates diffuse harms that extend far beyond the users themselves, undermining the notion of distributive justice. In either case, reliance on darūrah would only be credible where no energy alternatives can be deployed, and even then, must remain strictly time-bound and linked to transition pathways.

Diffuse and intergenerational harms:

Far from weakening the case for prohibition, this strengthens it. The principle of raf’ al-ḍarar and the Qur’ānic prohibition of ecological corruption (7:56) affirm the obligation to prevent such harms. Coal’s intergenerational impacts therefore render it particularly incompatible with the maqāṣid.

Industrial reliance (steel and cement):

Metallurgical coal is widely used in steel and cement production, yet viable alternatives such as electric arc furnaces and hydrogen-based direct reduced iron already exist. At most, this could justify a narrow darūrah allowance, contingent on demonstrable investment in alternatives and accompanied by clear sunset clauses.

Technological mitigation:

Advanced technologies such as carbon capture or emissions controls may reduce impacts, but they cannot eliminate emissions of particulates, sulphur dioxide, mercury, methane, or residual CO₂. The ‘illah of systematic harm remains intact.

Caution in prohibition:

Some argue jurisprudence should be cautious given coal’s entrenched role in global energy. Yet the tobacco precedent shows that prohibition can proceed through tadarruj, enabling transition without diluting ethical clarity. Once causal harm is established, categorical rulings are consistent with the sharī’ah, with allowances made only under tightly delimited darūrah.

Together, these objections and responses reinforce the importance of applying a rigorous and transparent framework to ensure consistency and accountability in rulings and financial decision-making.

4.4 Implications

The principle of *qiyās* provides a coherent basis for extending the prohibition applied to tobacco to coal. Doing so affirms the consistency of Islamic legal reasoning and upholds the ethical imperatives of the *maqāṣid al-sharī'ah*. To refrain from such a ruling in the face of overwhelming evidence would undermine both doctrinal coherence and the credibility of Islamic finance.

Temporary reliance on coal may only be tolerated under *darūrah*, provided it is time-bound, transparently justified, and accompanied by a credible transition strategy in line with *tadarruj*. The criteria for assessing such claims are set out in Section 5 and Annex 1.

5. Islamic Finance and the Responsibility to Act

5.1 Sharī'ah Screening in Islamic Finance

The cumulative evidence on coal's harms to life, the environment, and economic stability demonstrates that it belongs in the same category. To continue permitting coal investment while prohibiting tobacco creates a doctrinal inconsistency: tobacco was excluded once its effects on *ḥifẓ al-naḥs* were clear, yet coal has been shown to produce wider, more systemic, and intergenerational harm. The ethical coherence of *sharī'ah* screening therefore requires that coal be subjected to the same standard of prohibition.

Islamic finance employs screening mechanisms to ensure that investments align with the ethical imperatives of the *maqāṣid al-sharī'ah*. Industries deemed incompatible with its objectives, including alcohol, gambling, tobacco, and weapons, are excluded from compliant portfolios [AAOIFI, 2022]. These exclusions reflect both the principle of *maṣlaḥah* and the maxim *lā ḍarar wa lā ḍirār*.

5.2 Pathways for Action

If Islamic finance is to uphold its ethical mandate, disengagement from coal must be pursued alongside investment in alternatives that advance the objectives of the *sharī'ah*. Several pathways are immediately available.

Divestment:

Islamic financial institutions can phase out holdings in coal mining, production, and power generation. Since 2015, nearly sixty countries have curtailed or cancelled new coal capacity, reflecting tightening policy, economic and health headwinds that have constrained new coal development [Carbon Brief, 2024; Carbon Brief, 2022]. For Islamic finance, early divestment would affirm alignment with the global energy transition while avoiding exposure to stranded assets.

Green *ṣukūk*:

Pioneered in Malaysia and now used widely across Muslim-majority contexts, these instruments show how *sharī'ah*-compliant capital markets can finance renewable energy, grid infrastructure, and sustainable development [World Bank and Securities Commission Malaysia, 2019]. By linking returns to environmental stewardship, green *ṣukūk* provides practical effect to the *maqāṣid*. In market terms, ESG-labelled *sukuk* surpassed US\$50 billion outstanding by the end of 2024 (LSEG), and recent issues have typically been oversubscribed.

ESG-aligned Islamic funds:

By integrating Environmental, Social and Governance standards with *sharī'ah* criteria, such funds can attract a wider pool of socially conscious investors while strengthening exclusionary screening standards. Datasets such as the Global Coal Exit List provide robust tools for identifying and excluding coal-related companies [Global Coal Exit List, 2024].

Taken together, these pathways indicate how Islamic finance can reinforce its ethical distinctiveness, redirect capital flows away from harmful sectors, and contribute to the global transition towards sustainability.

5.3 Darūrah and Conditional Permissibility

Some Muslim-majority economies remain structurally dependent on coal, raising questions about transitional allowances. Islamic jurisprudence acknowledges *darūrah* as a basis for temporary, necessity-based dispensations, when strict

adherence to a prohibition would itself produce greater harm. Yet *darūrah* is tightly circumscribed: it cannot be invoked on grounds of convenience or cost, and it applies only where essential services or livelihoods are demonstrably at risk and no viable alternatives exist.

In practice, reliance on coal under *darūrah* would need to be time-bound, linked to a credible exit plan in line with *tadarruj*, and justified by local circumstances such as energy poverty or infrastructural constraints. Any dispensation must also support transition by being paired with investment in renewable energy, efficiency, or alternative technologies, and accompanied by safeguards such as worker retraining and transparent disclosure.

To ensure consistent application, this paper sets out a diagnostic framework. The full scorecard, with thresholds, scoring, and country-level examples, is provided in Annex 1.

5.4 Implications for Screening Methodologies

Extending exclusionary criteria to coal represents both an ethical obligation and a doctrinal necessity. Industries that inflict systemic, preventable harm cannot remain permissible within *sharī'ah*-compliant finance.

The articulation of a transparent *darūrah* framework ensures that any transitional reliance is clearly defined, monitored, and directed towards credible pathways for exit. This dual approach, which positions prohibition as the normative rule, combined with strictly limited allowances under *darūrah*, offers scholars and practitioners a coherent methodology. It preserves the integrity of *sharī'ah* reasoning while enabling Islamic finance to engage constructively with the practical realities of energy transition in diverse contexts.

At an industry level, for the Islamic finance sector, this approach reflects a progressive and enhanced sophistication of the screening methodologies, aligned with the sector's ongoing evolution.

6. Case Studies: National Pathways for Transition

Muslim-majority countries are already demonstrating how Islamic finance can be mobilised in ways that either reinforce or undermine the objectives of the *maqāṣid al-sharī'ah*. The following case studies provide detailed evidence of how regulatory frameworks, capital markets, and policy initiatives are shaping transition pathways.



6.1 Malaysia: Green *Ṣukūk* Initiative

Malaysia pioneered the world's first green *ṣukūk* in 2017, designed to finance renewable energy and sustainable infrastructure within a *Sharī'ah*-compliant framework [World Bank & Securities Commission Malaysia, 2019]. Jointly developed by the Securities Commission, Bank Negara Malaysia and the World Bank, it aligns with international green bond standards [World Bank & Securities Commission Malaysia, 2019; Bank Negara Malaysia, 2018]. Proceeds from these instruments have financed solar, hydro and energy-efficiency projects.

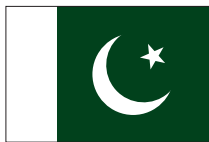
The initiative has since expanded, creating a replicable model for mobilising Islamic capital toward climate mitigation and adaptation. Malaysia's Value-based Intermediation (VBI) framework further links *Sharī'ah* compliance to sustainability outcomes, encouraging Islamic banks to direct capital into sectors that advance *maṣlaḥah* and *ḥifẓ al-bī'ah* [Bank Negara Malaysia, 2018].

Ahead of COP28, the Securities Commission issued the *Maqāṣid al-Sharī'ah* Guidance for the Islamic Capital Market Malaysia in November 2023 and established a *Maqāṣid al-Sharī'ah* Taskforce in May 2025 to operationalise it across market participants [Securities Commission Malaysia, 2023; Securities Commission Malaysia, 2025].

Malaysia demonstrates that regulatory support, coupled with strong demand for ESG products, can position Islamic finance as a leader in sustainable transitions. It also shows that adding coal to exclusion lists does not reduce investment opportunity but redirects capital toward ethically aligned growth sectors.

2017

Malaysia pioneers the world's first green *ṣukūk*, designed to finance renewable energy and sustainable infrastructure within a *Sharī'ah*-compliant framework.



2025

Pakistan issued its first sovereign domestic green *shukūk* in May 2025 via PSX to finance priority green projects.

6.2 Pakistan: Clean Energy *Shukūk*

Pakistan issued its first sovereign domestic green *shukūk* in May 2025 via PSX to finance priority green projects [PSX, 2025; Environmental Finance, 2025]. This was a significant step in a country where coal has become an increasing share of the power mix, despite its acute climate vulnerability.

Although coal accounted for 14 to 16 per cent of power generation in recent years [IEA, 2024; Ember, 2024], the issuance of clean energy *shukūk* demonstrates how Sharī'ah-compliant finance can provide an alternative to fossil-heavy investments. By financing renewables, Pakistan can reduce exposure to imported coal and strengthen energy security while advancing *ḥifẓ al-nafs* through reduced air pollution.

The case highlights both opportunities and challenges. While policy frameworks remain uneven, Islamic finance instruments can create pathways for transition even in coal-dependent economies. The ethical imperative is to ensure that coal phase-outs are coupled with renewable deployment, re-training programmes and measures to protect low-income populations, thereby aligning with *maṣlaḥah*.



74%

Allocated to renewables under the new Electricity Supply Business Plan (RUPTL) for 2025–2034.

6.3 Indonesia: RUPTL 2025–2034 Energy Plan

Indonesia, one of the world's largest producers and consumers of coal, has introduced a new Electricity Supply Business Plan (RUPTL) for 2025–2034. The plan allocates approximately 74 per cent of new capacity to renewables and 26 per cent to fossil fuels [IEEFA, 2025]. While this represents a shift in planned capacity expansion, fossil fuels are projected to dominate actual generation for decades.

Indonesia was the first country to issue a green sovereign *shukūk* in 2018, raising USD 1.25 billion, demonstrating how Islamic instruments can mobilise capital for the transition and paving the way for *shukūk* and blended finance to fund grid expansion, decentralised solar and storage [UNDP, 2018; World Bank, 2020]. For Indonesia, where coal contributes more than 60 per cent of electricity generation, the jurisprudential challenge lies in whether continued reliance can still be tolerated under *darūrah* [IEA, 2025].

This case underscores the urgency of operationalising the *darūrah* scorecard set out in Annex 1. Limited allowances may be recognised for essential services in off-grid regions, but national reliance cannot be justified indefinitely. Transition finance grounded in Sharī'ah offers a means to reduce coal dependence while upholding the objectives of *ḥifẓ al-bī'ah* and *ḥifẓ al-māl*.



6.4 United Arab Emirates: Climate Law and Green Finance

The United Arab Emirates has codified its climate commitments through Federal Decree-Law No. (11) of 2024 on the Reduction of Emissions and Green Development, aligning the system with Net Zero by 2050 [UAE Ministry of Climate Change and Environment, 2024], demonstrating a transition from voluntary commitments to binding obligations. Dubai has reinforced this through its own Net Zero Strategy, centred on the Mohammed bin Rashid Al Maktoum Solar Park, which will deliver 5,000 MW of clean energy by 2030.

5,000 MW

Of clean energy will be delivered by Mohammed bin Rashid Al Maktoum Solar Park by 2030.



10B Trees

To be planted by 2030 as pledged in the Saudi Green Initiative, 2024.



2060

Kazakhstan's net-zero strategy target that phases coal retirements and upgrades grids.

Islamic financial institutions are playing a central role in mobilising capital through green *ṣukūk*, sustainability-linked loans, and ESG funds. These instruments are being directed towards solar projects, retrofitting of existing buildings, and clean mobility infrastructure.

The UAE example illustrates how legal mandates, and Islamic finance can operate in tandem to achieve sustainability targets. By embedding sustainability regulations within Islamic finance, the country ensures new investments align with the objectives with *ḥifẓ al-bī'ah* and *ḥifẓ al-māl*, while strengthening economic diversification.

6.5 Saudi Arabia: Vision 2030 and Green Finance

Saudi Arabia's Vision 2030 sets out a broad programme of economic diversification and sustainability. The Saudi Green Initiative commits to reducing emissions by 278 million tonnes by 2030, expanding renewable energy, and planting ten billion trees [Saudi Green Initiative, 2024]. The country has also pledged to reach net zero emissions by 2060.

To finance these initiatives, Saudi Arabia introduced a Green Finance Framework in 2023, enabling the issuance of sovereign green bonds and *ṣukūk*. Major projects such as NEOM, a planned carbon-neutral city powered entirely by renewables, illustrate how *sharī'ah*-compliant instruments can underpin large-scale sustainable development.

Saudi Arabia's case is particularly relevant given its status as a leading oil exporter. By extending *sharī'ah* screening to carbon-intensive industries, it demonstrates that fossil-dependent economies can still chart a credible path towards alignment with *maṣḥālah* and the preservation of life and environment.

6.6 Central Asia: Kazakhstan and Uzbekistan Transition Pathways

In Central Asia, coal's role is heterogeneous and closely tied to winter heat demand, legacy district-heating networks, ageing thermal fleets and regional supply balancing. Kazakhstan remains heavily dependent on coal for electricity and heat, presenting complex but navigable transition challenges. Policy signals now include plans for early retirement or repurposing of selected coal assets, backed by multilateral support, and a 2060 net-zero strategy that phases coal retirements and upgrades grids [ADB, 2024; UNFCCC, 2024]. Independent analysis indicates that a sequenced package of CHP modernisation, district-heating rehabilitation and renewables build-out can reduce winter vulnerability while enabling predictable coal retirement schedules [Agora Energiewende, 2024].

Uzbekistan's energy mix is dominated by natural gas, with coal playing a smaller role, and while recent production pressures and seasonal demand have prompted limited interim coal use in some regions [ROGTEC, 2025], diversification is advancing through renewables and regional power integration. The Draft Islamic Banking Law (2024) aims to mobilise *sharī'ah*-compliant finance for clean-energy projects [Times of Central Asia, 2025], reinforcing a pathway that reduces coal exposure over time.

These examples demonstrate how Muslim-majority economies with different starting points can apply *darūrah* and *tadarruj* to achieve ethically aligned energy transitions consistent with the *maqāṣid al-sharī'ah*.

7. Policy and Regulatory Pathways

Islamic finance already possesses the institutional architecture through which jurisprudential reasoning can be translated into practice. What is required now is coordinated action across standard-setting bodies, regulators, multilateral development banks, and market institutions, aligned with the objectives of the *maqāṣid al-sharī'ah* and operationalised through screening that excludes coal while allowing only narrow and temporary dispensations under *darūrah*.

7.1 Standard-setting and Jurisprudential Clarity

The role of standard-setting bodies is fundamental in establishing coherence. AAOIFI, as the principal authority on *sharī'ah* standards in Islamic finance, could issue guidance affirming the impermissibility of coal financing, subject only to temporary allowances under *darūrah*, supported by credible transition plans. Such guidance would bring coal into the same category as alcohol, gambling, tobacco, and weapons, embedding the principle that industries causing systemic harm cannot remain permissible under the *sharī'ah*. Screening committees, indices, and funds could then incorporate this standard consistently across markets.

7.2 Prudential Supervision

The IFSB has a complementary role in embedding these ethical imperatives within prudential supervision. By issuing recommendations that progressively reduce coal exposure on regulated balance sheets, the IFSB could align risk-based oversight with the principles of the *sharī'ah*. Measures may include differentiated capital requirements for coal-linked assets, higher risk weights, and preferential treatment for renewable and transition-aligned investments. Supervisory expectations could also encompass the publication of coal exposure run-off plans and the integration of *darūrah* criteria into internal ratings and credit policies.

7.3 Central Banks and National Regulators

Central banks and financial regulators in Muslim-majority jurisdictions are increasingly integrating sustainability into their supervisory frameworks. A number have central-bank *Sharī'ah* supervisory boards that set the criteria for compliance across Islamic finance within their jurisdictions. Extending this work to include coal exclusions in financial products, promote the issuance of green *ṣukūk*, and ensure that new instruments align with national net-zero strategies would embed *maqāṣid*-based reasoning within regulatory systems. In doing so, regulators would ensure that Islamic finance not only reflects ethical imperatives but also contributes directly to national climate commitments.

7.4 Multilateral Finance

The Islamic Development Bank is positioned to play a decisive role by phasing out coal financing from its sovereign and non-sovereign portfolios while expanding concessional facilities for renewable energy, grid modernisation, and just transition programmes in coal-dependent economies. Blended finance structures that combine concessional tranches with green *ṣukūk* could help mobilise private capital at scale, particularly in contexts where reliance on coal is still defended on grounds of *darūrah*.

7.5 Public–Private Partnerships and Market Infrastructure

National governments and market institutions also have a responsibility to create enabling conditions for transition. Replicating proven models of public–private partnership can help channel private capital into renewable energy and grid infrastructure. Securities regulators and exchanges can reinforce this by developing model frameworks for green *ṣukūk* that satisfy both *sharī'ah* requirements and international standards, building on precedents already established in Malaysia and elsewhere. Blended solutions working together with Islamic social finance institutions (e.g. *zakāt*, *awqāf*, etc.) could also provide a source of innovative transition finance.

7.6 Governance, Disclosure, and Data Tools

At the institutional level, boards of Islamic financial institutions should integrate coal exclusions and *darūrah* provisions into their *sharī'ah* governance policies. Independent audits and transparent disclosure of exposures, run-off schedules, and the allocation of green financing would reinforce credibility. Assurance mechanisms are also required to confirm that new instruments genuinely displace coal rather than shift reliance to other fossil fuels.

Supervisors and screening committees should adopt recognised datasets and benchmarks to support decision-making. Resources such as WHO, IPCC, IEA, WRI, and the Global Coal Exit List provide authoritative evidence on health, climate, water stress, and corporate activity. Using such sources consistently would ensure that exclusions are applied rigorously across jurisdictions.

7.7 Just Transition Safeguards

Coal exclusion must be accompanied by measures that uphold distributive justice. Worker retraining, livelihood diversification, affordable energy access, and continuity of essential services should form explicit conditions of financing. Without such safeguards, divestment risks imposing disproportionate burdens on vulnerable groups, contradicting the principle of *maṣlaḥah*. Embedding just transition safeguards ensures that prohibition remains aligned with the higher objectives of the *sharī'ah* and contributes to a transition that is both equitable and sustainable.

8. Conclusion

Islamic jurisprudence has long demonstrated the capacity to evolve in response to new evidence of harm. The trajectory of tobacco from widespread acceptance to prohibition once its dangers were scientifically established illustrates this adaptability and affirms the centrality of the *maqāsid al-sharī'ah*. Coal presents a challenge of even greater magnitude. Its combustion produces harms that are systemic and intergenerational, undermining the protection of life, wealth, and the environment, and generating economic burdens that compromise long-term stability. The analogy with tobacco therefore highlights not only a precedent but also a doctrinal imperative: just as tobacco could not remain permissible once its dangers were clear, so too can coal no longer be reconciled with the ethical commitments of the *sharī'ah*.

This paper has argued that the prohibition of coal is consistent with established principles of Islamic law. Through *qiyās*, the causal *'illah* that justified tobacco's prohibition is shown to apply equally to coal, while the principles of *maṣlaḥah*, *raf' al-ḍarar*, and distributive justice together reinforce the case for exclusion. Where transitional reliance persists, allowances can only be justified under *darūrah*, subject to strict conditions of temporariness, contextual necessity, and demonstrable investment in alternatives. The diagnostic scorecard set out in Annex 1 offers one way of operationalising these conditions, ensuring that claims of *darūrah* are evaluated consistently and transparently.

The implications for Islamic finance are far-reaching. Screening methodologies must be updated to incorporate coal alongside other excluded industries, ensuring coherence between ethical reasoning and market practice. Pathways for action already exist, from divestment and the expansion of green *ṣukūk* to the development of ESG-aligned Islamic funds. Case studies show that Muslim-majority countries are beginning to mobilise Islamic finance for renewable energy and sustainable infrastructure, providing practical models that can be scaled and adapted. Policy reforms at the level of AAOIFI, the IFSB, central banks, and the IDB could entrench these practices, while governance, disclosure, and assurance mechanisms within financial institutions would reinforce credibility.

The transition away from coal must also be just. Worker retraining, livelihood diversification, affordable energy access, and the safeguarding of essential services are necessary to ensure that the burdens of transition do not fall disproportionately on vulnerable groups. Without such safeguards, prohibition risks undermining the very principle of *maṣlaḥah* it is intended to uphold.

The task before scholars and practitioners is therefore to translate overwhelming evidence into jurisprudential clarity and financial governance. Recognising coal as *ḥarām* in principle, and managing transitional allowances under *darūrah* with rigour, would not only preserve the integrity of the *sharī'ah* but also demonstrate its capacity to guide collective moral and financial responses to the defining challenges of this century.

Annex 1: Darūrah Scorecard – Framework for Conditional Permissibility

Purpose

This annex provides the full diagnostic scorecard referenced in Section 5.3, detailing suggested criteria, scoring, and safeguards for evaluating claims. The framework can be adapted to country-specific contexts such as Indonesia, Uzbekistan, and Kazakhstan, where structural dependence on coal necessitates phased, ethically guided transition planning consistent with *tadarruj*. The framework is intended to support scholars, *fatwā* councils, and Islamic financial institutions in assessing such claims for continued coal reliance. It operationalises the principle that temporary dispensations may be recognised only when they are time-bound, context-specific, and transition-enabling, and must always be accompanied by credible pathways for exit in accordance with *tadarruj*.

Jurisprudential foundation

- Ḥifẓ al-nafs (protection of life) requires the prevention of avoidable mortality and morbidity caused by coal combustion [WHO, 2023; Vohra et al., 2021].
- Ḥifẓ al-māl (protection of wealth) is engaged by the trillions of dollars in annual economic losses from coal-related health costs and climate impacts [World Bank, 2022].
- Ḥifẓ al-bī'ah (protection of the environment) is violated by coal's disproportionate share of CO₂ and methane emissions [Global Carbon Project, 2024; IEA, 2024].
- Maṣlaḥah (public interest) requires that long-term communal welfare outweigh short-term convenience.

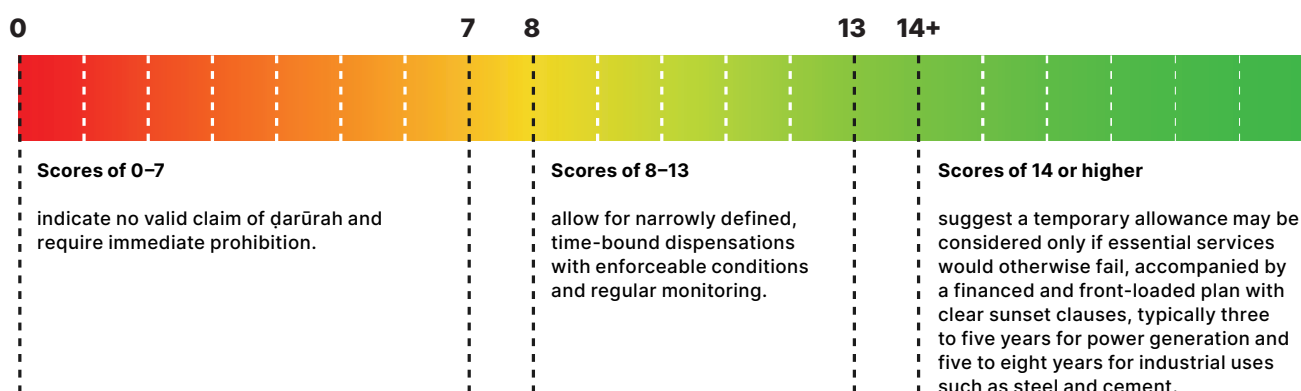
Criteria

The below presents an indicative set of criteria scored on a 0–3 scale. Higher totals strengthen the presumption of prohibition.

Criterion	0	1	2	3	Implication for permissibility
National energy dependence on coal	<20%	20–40%	40–60%	>60%	High dependence may support temporary darūrah if no alternatives are immediately viable.
Economic capacity for energy transition (GDP per capita, access to concessional finance)	High capacity, concessional finance accessible	Moderate	Limited	Severely constrained	Darūrah cannot be justified solely on grounds that coal appears cheaper in the short term. Countries with high capacity but no transition plan would be unlikely to qualify.
Availability of alternatives (e.g. renewables)	>30%	10–30%	<10%	None demonstrable	Greater availability of alternatives potential weakens darūrah claims. Security, affordability and sustainability will be key factors in assessing available alternatives.
Public health burden from coal	Low	Moderate	High	Very high, inequitable	High harm to ḥifẓ al-nafs may override economic justifications.
Transition policies or net-zero commitments	Published with finance and timelines	Published without finance	Draft only	None	Strong planning weakens darūrah claims and impacts speed of transition and thus associated timeframe for any dispensations given.
Employment and livelihood dependence	Low or robust plan	Moderate with plan	High with partial plan	High, no plan	Impacts on ḥifẓ al-māl must be weighed against health and environmental harms.
Methane intensity and abatement feasibility	Low intensity or abatement in place	Moderate with plan	High, plan pending	High, no plan	Neglect of methane abatement would weaken darūrah claims.
Industrial reliance on metallurgical coal (steel and cement)	Substitutes available and financed	Substitutes available but unfunded	Limited substitutes, pilots planned	No substitutes planned	Any dispensation may require evidence of investment in alternatives such as EAF, DRI–H ₂ or equivalent.
Import dependence vs domestic production	Minimal imports	Mixed profile	Moderate import reliance	High import dependence	Heavy import reliance may weaken darūrah claims by signalling structural vulnerability and supply risk that weakens a darūrah claim.

Interpretation – indicative categorisation of responses

- 0–7: No valid darūrah. Coal use would be ḥarām and transition should proceed immediately.
- 8–13: A narrow and time-bound darūrah may be recognised only with enforceable conditions, quarterly monitoring, and demonstrable investment in alternatives.
- ≥14: A temporary dispensation may be considered only if essential services are at risk and a financed, front-loaded transition is in place. In such cases, indicative sunset clauses could be three to five years for power generation and five to eight years for industrial uses such as steel, with associated measurable milestones in line with tadarruj.



Application examples

- Pakistan: Temporary darūrah may be considered for short-term system security; rapid solar and grid additions suggest reliance is not long term. Time-bound, with financed milestones for renewables, storage, and distribution, and strict sunset clauses.
- Indonesia: Limited darūrah in remote/off-grid regions; national policy already mandates transition. Narrow and time-bound, tied to mini-grids, storage, and accelerated renewables procurement with clear exit timelines.
- Saudi Arabia and UAE: Minimal coal reliance; darūrah does not apply. Screening to emphasise coal exclusion alongside continued clean power, efficiency, and demand-side management.
- Bangladesh: Short-term darūrah possible given current dependence and supply risks; phase-out remains critical. Time-bound with strict sunset dates and financed milestones for renewables, efficiency, and grid reinforcement.
- Türkiye: No valid darūrah given severe health impacts and available alternatives. Screening to prioritise coal exit and investment in renewables, storage, and transmission.
- Kazakhstan: High coal reliance in power and district heating with regional employment and methane intensity. Narrow, time-bound darūrah only for short-term grid/heat security, contingent on milestones for renewables build-out, coal-mine methane abatement, and just-transition plans.
- Uzbekistan: Coal below gas but rising amid gas decline and seasonal shortages. Limited, time-bound darūrah for winter heat or critical industry, with strict sunsets and demonstrable investment in renewables, storage, efficiency, and interim gas balancing.
- Kyrgyzstan: Hydro-dominant power system; coal significant for winter heat/CHP with urban air-quality impacts. Limited, time-bound darūrah for winter heat security, tied to district-heating upgrades, building efficiency, clean-heat substitutes, and regional balancing, with strict sunsets.

Safeguards

To avoid unintended consequences, any allowance for darūrah would need to be accompanied by:

- Immediate prohibition of new coal project financing.
- Parallel and verifiable investment in alternatives such as renewable energy, efficiency, and storage.
- Worker retraining and livelihood diversification programmes.
- Transparent disclosure of darūrah justifications, with quarterly (or six monthly) monitoring.
- Encouragements (or requirements?) to consider that coal divestment be paired with renewable deployment, to prevent substitution of coal with oil or gas.

Annex 2: Coal Harms Data Tables and Interpretive Notes

A. Public Health Impacts

Region / Country	Estimated premature deaths linked to coal combustion	Source	Notes
Global (fossil fuels)	8.7 million premature deaths in 2018	Vohra et al., 2021	Coal is a principal contributor. Other modelling studies, such as Lelieveld et al. (2023), place the fossil-fuel attributable toll at ~5.1 million (3.6–6.3m) annually.
Global (coal-specific)	Coal-derived PM _{2.5} shown to carry over twice the mortality risk compared to PM _{2.5} from other sources	Henneman et al., 2023	Evidence from U.S. cohort data; underscores coal's disproportionate contribution to global mortality burdens
India	80,000–115,000 annually	Finkelman et al., 2021	National burden of disease
Europe	~23,000 annually	Finkelman et al., 2021	Concentrated in coal-dependent states
United States	460,000 deaths between 1999–2020	Henneman et al., 2023	Coal particulates nearly twice as harmful as other PM _{2.5}
Türkiye	4,818 deaths in 2019	HEAL, 2021	Also linked to 3,070 preterm births and 1.48m lost workdays

Implications

- Coal particulates are uniquely harmful, especially for vulnerable groups such as children, the elderly, and low-income communities.
- Health risks extend beyond mortality to chronic disease, pregnancy complications, and impaired childhood development [Landrigan et al., 2018; UNICEF, 2016].
- Household coal use in poorly ventilated homes creates disproportionate harm for women, children, and the elderly, exposing them to particulates, carbon monoxide, and toxic metals [WHO, 2014].
- From a jurisprudential perspective, these preventable harms violate ḥifẓ al-nafs and contravene the maxim lā ḍarar wa lā dirār [Sunan Ibn Mājah, 2340], while raising distributive justice concerns and threatening ḥifẓ al-ʿaql.

B. Climate and Environmental Impacts

Indicator	Value	Source	Notes
Global fossil CO₂ emissions (2024)	37.4 Gt (fossil fuel + industry)	Global Carbon Project, 2024	Record levels
Coal share of energy-related CO₂	Largest single fuel share	IEA, 2025	Largest single contributor
Methane from coal mining (2023)	~42 Mt CH ₄ (12% of energy-related methane)	IEA, 2024	China, India, and Indonesia lead emissions
New coal capacity added (2024)	~44 GW	Global Energy Monitor, 2025	Lowest in two decades, but still material
Planned new coal capacity	98% in 15 countries	Carbon Brief, 2023	More than one-third are Muslim-majority states
Water consumption (2013)	22.7 billion m ³	WRI, 2013	Equivalent to needs of >1 billion people
Plants in high water-stress regions	~50%	WRI, 2019	Long-term aquifer depletion risks

Implications

- Coal is the most carbon-intensive fossil fuel, locking in decades of emissions and driving ecological tipping points.
- Methane from coal mining accelerates near-term warming, magnifying climate risks for vulnerable communities.
- Heavy water use places coal in direct competition with agriculture and household needs, undermining intergenerational water security [Greenpeace, 2016; Greenpeace, 2018].
- Qur'ānic prohibitions on ecological corruption (7:56) make coal incompatible with ḥifẓ al-bī'ah and the principle of maṣlaḥah.

C. Economic Costs

Region / Country	Estimated annual economic cost of coal	Source	Notes
Global	USD 8.1 trillion	World Bank, 2022	Equivalent to ~6% of global GDP
Türkiye	€5.2–10.9 billion (2019)	HEAL, 2021	From premature deaths, lost workdays, and health burden
Pakistan	USD 30 billion (2022)	World Bank, 2022	Damages from floods intensified by climate risks
Global stranded assets risk	~USD 1 trillion by 2030	Carbon Tracker, 2022	Coal infrastructure at risk of becoming uneconomic

Implications

- Coal imposes vast costs on health systems, productivity, and infrastructure, undermining ḥifẓ al-māl.
- Coal-driven climate disasters destabilise national economies, especially in coal-reliant Muslim-majority states.
- Stranded asset risks and inadequate climate finance reveal structural wastefulness (isrāf) and exacerbate inequities between nations [UNFCCC, 2023].

D. Jurisprudential Implications

The evidence across health, climate, water, and economics demonstrates that coal inflicts systemic, widespread, and preventable harm. These harms engage multiple objectives of the *maqāṣid al-sharīʿah*:

- *ḥifẓ al-nafs* (protection of life)
- *ḥifẓ al-māl* (protection of wealth)
- *ḥifẓ al-bīʿah* (protection of the environment)
- *ḥifẓ al-ʿaql* (protection of intellect)

Coal's contribution to mortality, developmental harm, economic waste, and ecological degradation places it in direct violation of these objectives. Qur'ānic injunctions against self-harm (2:195), wastefulness (17:26–27), and corruption on earth (7:56) reinforce the obligation to prevent its continued use. The cumulative effect is to render coal irreconcilable with the objectives of the *sharīʿah*. It therefore warrants reclassification as *ḥarām*, with only narrow and temporary dispensations permissible under *darūrah* in line with *tadarruj*.

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