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Interrelationships between International Energy Law and Global Energy Governance —From the Perspective of Tortious Harms

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Energy is at the core of modern society, but energy activities often generate significant risks……

Examples of Tortious Harms in the Energy Sector

Oil spills: cause massive losses to fishermen, the tourism industry, and marine ecosystems.
Gas explosions and coal mine accidents: lead to severe human casualties and extensive property damage.
Coal mining pollution: dust and wastewater discharge harm the health of surrounding communities.
Air pollution from coal-fired power plants: emissions of sulfur dioxide and nitrogen oxides cause acid rain, respiratory diseases, and other health risks.
Solar energy projects:

- Land-use disputes emerge between photovoltaic developers and farmers.
- Solar panels contain heavy metals that, if not properly recycled, may create environmental hazards.

Hydrogen energy risks:

- Storage facilities pose risks; for instance, liquid hydrogen tank leaks can result in catastrophic accidents.
- Accidents such as pipeline leaks or explosions of hydrogen-powered vehicles raise issues of product liability and public safety.

	Traditional Tort Issues	Emerging Energy Tort Issues
Nature of Harm	Sudden and localized	Cumulative and global (e.g., carbon emissions, oil spills, climate risks)
Causal Relationship	Relatively clear	Highly complex. Energy-related harms are diffuse and cumulative, making it difficult to apply traditional tort doctrines of causation, foreseeability, and proximity
Liability Model	Primarily direct tort, product liability, and environmental pollution liability	Increasingly shifting toward "climate torts", possibly combined with human rights and due diligence obligations
Legal Tools	Civil tort law, environmental law	Special conventions exist to address certain issues (e.g., nuclear liability, oil pollution funds)
Compensation Scope	Direct damages	Broader obligations, including mitigation duties, adaptation duties.....

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Tortious Harms in Global Energy Governance: Special Features

Beyond compensation

- Not merely a matter of monetary damages or product liability.
- Often connected with **public safety, human rights, and climate change**.

Long-lasting consequences

- Harms are not resolved through a single settlement.
- Effects may continue for years or even generations.

Difficult to measure and quantify

- Includes both direct and indirect harms.
- Damages may be uncertain, diffuse, and transboundary.

Need for International Energy Law (IEL) attention

- Policymakers and legislators are not insurance companies.
- The role of law is not only to resolve disputes, but also to prevent harms.
- Principles of responsibility, precaution, and deterrence are crucial.

Tortious Harms in Need of Attention within IEL

Fragmented liability mechanisms: IEL currently lacks a uniform framework for attributing responsibility for such harms, leaving victims without effective remedies.

For example, nuclear accidents are covered by specialized international conventions, but oil spills, transboundary pollution, and climate damages are mostly left to domestic tort law. Victims face fragmented remedies, inconsistent judgments, and limited enforcement.

Tortious Harms in Need of Attention within IEL

Uncertain causation and systemic challenges: Climate-related harms are diffuse and cumulative, making it difficult to apply traditional tort doctrines of causation, foreseeability, and proximity.

North–South divides: Developed states tend to favor strong liability regimes, while developing states view them as economically burdensome, fearing reduced investment and developmental constraints. This results in deadlock in treaty negotiations.

From compensation to deterrence: Tort law is not only compensatory but also preventive. Current IEL mechanisms focus on compensation after harm occurs, while stronger preventive mechanisms are needed, such as mandatory insurance, risk assessments, and best available technologies.

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Towards Normative Integration of IEL and Global Energy Governance

☐ Future IEL should evolve from a state- and investor-centric framework to one that also embeds accountability, justice, and prevention of harms.

☐ Amending existing treaties, such as introducing liability.

Developing model frameworks or guiding principles to harmonize approaches.

Strengthening connections with environmental and human rights regimes to avoid governance gaps.

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Towards Normative Integration of IEL and Global Energy Governance

☐ Incorporating tort law principles provides a pathway forward:

Duty of care: Energy actors must take reasonable measures to avoid foreseeable harm.

Proportionality: Economic and investment interests must be balanced with environmental protection and human rights.

Foreseeability: Liability should extend to predictable harms, including climate-related impacts.

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Contribution to Global Energy Governance

☐ **Enhancing accountability and inclusivity**: Tort principles expand access to justice for communities and individuals, not only states and investors.

☐ **Embedding justice in energy transitions**: harms will be fairly compensated.

☐ **Fostering coherence across fragmented regimes**: Tort law provides a unifying framework across trade, investment, environmental, and human rights regimes, reducing inconsistencies and forum shopping.

☐ **Strengthening preventive governance**: Tort law's deterrence function encourages ex ante measures to reduce risks.

Thank you!