

**LEGAL, INSTITUTIONAL, AND ECONOMIC FRAMEWORK TO SUPPORT
SUSTAINABLE DEVELOPMENT**

TOTAL SET OF INDICATORS
(Italics Indicates Priority Indicator)

Sub-heading 1¹: Extent to which the legal framework (laws, regulations, guidelines, legal decisions, etc. at multiple geo-political scales) accommodates sustainable practices for energy and mineral/materials systems over the life cycle, including the extent to which it provides for:

1a. *Clear property rights, (including mineral rights, secure land tenure, and restrictions intended for the conservation of lands with special values), recognition of customary and traditional rights of indigenous people, and a means of resolving disputes.*

This indicator covers land tenure arrangements, land access, rights to develop and sell energy and mineral resources in the ground or after extraction, rights to trade properties and resources, rights of indigenous peoples, and dispute resolution. Stable and clearly delineated property rights are a fundamental aspect of sustainable resource management.

1b. *Periodic energy and mineral material resource: assessment, land use planning, and policy review at multiple geo-political scales, including collaboration, coordination and participation by relevant communities of interest (public, and federal, state and local governments, etc).*

This indicator addresses the manner in which energy and mineral resources are managed, including the presence of a system of legal review, allowance for adaptation, availability of information for decision-making, and public participation in decision-making.

1c. *Innovation supporting development and use of cutting edge practices and technology.*

This indicator addresses the legal climate for technological advancement. It also measures the extent to which the legal regime encourages or allows for innovation, as well as adoption of new technologies and practices, in a timely manner.

1d. *A compliance and enforcement framework that is understandable, implementable, transparent, and stable; including provisions for the resolution of conflicting provisions in legislation and regulations; and requiring clear standards, open decision processes, and consistency over the time.*

This indicator reports the presence and character of the legal mandate for regulatory and compliance regimes, as well as the stability of the regulatory framework under which energy and mineral activities take place.

¹ Many of the indicators that resided under Montreal Process Legal and Institutional Subcriterion 2 have been combined with parallel indicator in Subcriterion 1 to reduce duplication.

1e. *The reuse, recycling, and/or remanufacture of energy or mineral materials.*

Reuse, and recycling are important components of sustainable resource management. This indicator assesses the legal climate under which reuse, recycling and remanufacturing take place and identifies differential regulatory treatment of virgin vs. secondary materials.

1f. U.S. participation in international Treaties and agreements that enhance or inhibit domestic sustainable practices for energy and mineral/materials systems.

This indicator reports how U.S. participation in international treaties and agreements modifies the existing legal environment in the U.S. and affects sustainable practices for energy and mineral material systems.

1g. Development and maintenance of efficient physical infrastructure to facilitate the supply of energy and mineral/material products and services and support sustainable practices for energy and mineral/material systems.

This indicator reports the laws and regulations governing the construction and maintenance of physical infrastructure necessary to the provision of energy and mineral resource to the market. It considers the degree to which laws, regulations and economic frameworks support or hinder the development and maintenance of physical infrastructure necessary for sustainable development.

1h. Estimation and reporting of the full compliance burden associated with the legal framework throughout the lifecycle of energy and mineral/materials, where compliance burden is defined very broadly and includes presence of uncertainty and duplication across regulatory authorities.

This indicator addresses regulatory performance accountability, i.e., it reports whether the government is examining the legal and regulatory regime in benefit/cost terms, whether laws and regulations are periodically reviewed to assess their effectiveness at accomplishing their intended purpose, and at what cost.

Subheading 2: Extent to which the institutional framework enhances or inhibits sustainable practices for energy and mineral/material systems over the life cycle, including the capacity to provide for:

2a. *Public involvement activities (education, awareness, extension programs, community capacity building and information availability) with respect to sustainable practices for energy and mineral material resources.*

Public participation in resource management and decision making is a basic principle of sustainable development. This indicator assesses how the institutional framework addresses public engagement, the presence of education programs about sustainability of energy and mineral resources, and extent of requirements to make pertinent information available.

2b. *Development and maintenance of skilled workforce (competencies and skills) across relevant disciplines and institutions.*

This indicator reports the degree to which the institutional environment supports the development of human resources and the maintenance of a well-trained workforce. It is based on the assumption that the quality of energy and minerals related activities is in part a function the skills and knowledge of the workers.

Subheading 3: Extent to which the economic framework (economic policies and measures) enhances or inhibits (provides incentives and disincentives for) sustainable practices for energy and mineral/ material systems over the life cycle.

3a. *Investment and taxation policies that enhance or inhibit sustainable practices for energy and mineral/material systems*

There is a need for investment and taxation policies that recognize the long-term nature of investments and permit the flow of capital in and out of the energy and mineral/material sectors in response to market signals, non-market economic valuations. The indicator considers how economic policy decisions affect our ability to meet the short- and long-term demands for the goods and services provided by energy and mineral/materials.

3b. *Identification and reporting of external costs (direct and opportunity, monetary or otherwise) of energy and mineral/materials related activities.*

This indicator assesses the degree to which the economic framework requires, allows for, or inhibits the reporting and use of external costs in energy and mineral policy making, management, and decision making.

Subheading 4: Capacity to measure and monitor the parameters associated with the sustainability indicators developed for energy and mineral/materials systems.

4a. Compatibility with other countries in measuring, monitoring and reporting on indicators

The energy and minerals industries are global both in terms of exploration and extract and in trade. This indicator reports international data reporting consistency; and the presence of compatible protocols, both of which support enhanced cooperation and collaboration.

Subheading 5: Authority and ability to conduct and apply research and development, including:

5a. Developing a scientific understanding of energy and mineral material systems' characteristics and functions, including externalities with respect to environmental, social, economic and geologic systems, and of these resources in national income accounts.

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This indicator assess research and development capability. It reports energy and minerals research into methodologies to measure environmental and social costs/benefits from depletion, discovery, recycling, reuse, and remanufacture across the resource and production life cycles to support sustainability.

LEGAL AND INSTITUTIONAL CRITERION INDICATORS APPENDIX