Participant Notes

Session 2.3.International responses to the environmental problems of mining

Overview.

This session deals with information related to international agreements which seek nature preservation especially mitigating impacts which are likely to occur from the mining cycles which are: access to mining, mineral processing and mining product. These agreements may be used as a source for developing audit criteria when auditing mining.

Learning Objective

At the end of this session the participants will be in a position of understanding on how the international community has responded in trying to mitigate the impacts of mining activities on the environment, particularly control on mining access, processing and mining products.

Key Teaching Point 1.

- **Mining access control**

- Natural areas and resources,

For quite some time now international treaties have been developed to protect outstanding natural areas and resources.

The UNESCO World Heritage Convention for the Protection of the World Cultural and Natural Heritage (the World Heritage Convention, 1972). It provides for the preservation of outstanding natural and cultural sites by listing them as part of "the world heritage" – in these areas no developed activities such as mining are permitted.

Similarly, other important international conventions that limit the access of mining are the 1971 Ramsar Convention on Wetlands of International Importance, Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere, the 1968 African Convention on the Conservation of Nature and Natural Resources, the 1979 Bern Convention (Europe) and subsequent European Union Council Directives, and the 1985 ASEAN Agreement on the Conservation of Nature and Natural Resources.

These treaties are potentially very significant for the negotiation of sustainable development in mining, as they can be used to block or redirect mining access and development.

-Marine areas

The 1982 United Nations Convention on the Law of the Sea, which came into force on 12 November 1994, is a comprehensive framework for regulating our use, development and preservation of the vast marine areas, including mining and other mineral development in the ocean.

The Convention establishes two different mining regimes depending on the location of the minerals. Mineral resources generally within 200 miles of shore (within territorial seas, "exclusive economic zones" and continental shelf areas) are under the exclusive sovereignty of the coastal state. In these areas (about 35 per cent of the ocean), which are under a nation's jurisdiction, the national laws control mining access, environmental protection and other requirements can be applied. The other two thirds of the ocean (termed the "International Seabed Area" or "Area") are beyond any nation's jurisdiction and are governed by the Convention under a unique "global commons" regime. The Convention declares the Area's resources to be "the common heritage of mankind" and stipulates that the benefits of mining and other development are to be shared among all nations.

To accomplish this, the Convention established the "International Sea Bed Authority" (ISA), headquartered in Kingston, Jamaica. The treaty gives the ISA the power to permit and control all mining exploration and activity in the area. The Legal and Technical Commission makes recommendations to the Council on applications for mineral exploration rights, rules and compliance.

Within areas of a nation's jurisdiction, the treaty obliges states to "protect and preserve the marine environment" and expressly qualifies states' "sovereign right to exploit their natural resources pursuant to their own environmental policies" with the limitation that all development be "in accordance with their duty to protect and preserve the marine environment". Environmental protection provisions require states to adopt laws and regulations to control all forms of pollution, as well as monitoring and environmental assessment. Significantly, for the deep seabed, "international rules, regulations and procedures shall be established", and these will be precedent-setting because states are required to adopt pollution laws and regulations "no less effective than the international rules, regulations and procedures".

- Environmental impact assessment.

Environmental Impact Assessments or studies (EIAs) are now becoming an international standard for major developments such as mines. Most EIA requirements are coming from multilateral development banks and development assistance agencies. In many countries it is now a legal obligation to conduct an EIA study for development projects, including mining.

The United Nations Economic Commission for Europe (UN/ECE), a grouping of more than 50 northern hemisphere Governments, has negotiated the

Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention) (covering nations in the northern hemisphere). The treaty came into force in 1997, with 17 ratifying countries (chiefly in Europe) as well as the EU. It only applies to developments in a country that will have "significant adverse impacts" across national borders in another country and sets up a regime of notification, EIA preparation, consultation, dispute settlement and research.

Since EIAs provide an effective and flexible tool in dealing with new mining and industrial development, and since less than half the world's countries have national laws requiring them (such as the United States National Environmental Policy Act), international EIA laws can be of great support and importance to resource-based economies. Countries without such EIA laws may find involvement with one of the regional treaty regimes a good substitute. Progressive international mining companies may agree to prepare or finance EIAs even in situations where national law does not require them, in order to avoid future liability for not meeting "international standards" of performance.

Key Teaching Point 2.

- **Mining process control**

-Control on mining operation
With respect to deep seabed mining, the Convention on the Law of the Sea sets up the framework for developing a complete regime of operational law. With respect to terrestrial mining, the nature/biodiversity treaties can also increase the controls on mining. Similarly, when EIA laws apply, the findings of the study can reveal the need to condition the permits with special environmental requirements controlling the operation.

-Water quality treaties
Other examples of international standards intruding on the mining process are the various international and regional treaties governing water quality. These include a number of treaties about marine pollution from land-based sources, vessels, and dumping and pollution of fresh water resources. Mining operations whose wastes can reach any of the covered water bodies need to pay especially close attention to the requirements of, and future developments in, these treaties, as many set relatively concrete international standards

Air pollution
Air pollution from mining, smelting and related operations is still regulated chiefly by national laws. However, there are several international air agreements that have potential implications for the future of the mining industry.

Convention on Long-Range Transboundary Air Pollution (LRTAP)
There is an increasing number of regional treaties governing transboundary air pollution – emissions originating in one country that cross national borders into another country. The Convention on Long-Range Transboundary Air Pollution (LRTAP) - which has four protocols setting specific emissions limitations on sulphur dioxide, nitrogen oxides and volatile organic compounds - provides very substantive restrictions on some of the basic mineral beneficiation pollutants in northern hemisphere countries (such as the EU, United States, Canada, and Russia).

The LRTAP Heavy Metals Protocol is particularly significant to the metal mining/smelting industry, both because of its air quality restrictions and because it could ban certain metal production processes and products when their use or disposal could lead to transboundary air pollution. Additional regional treaties are being developed to control transboundary air pollution, with similar potential impact on mining and the environment, for example, in the United States, Canada and Mexico.

Kyoto Protocol
The Kyoto Protocol provides a comprehensive approach for controlling greenhouse gases (GHGs), those chemicals which form a heat-trapping layer in the upper atmosphere and contribute to "global warming", chiefly carbon dioxide and methane. The mineral industry is affected; to the extent its processes release CO2, methane and other GHGs.

Key Teaching Point 3.

- **Mining product control**

-mining products
International treaty restricts certain mining end-products, and even outright bans. The trend is to control waste or pollution by controlling or banning the use of the commodity in trade, recycling and/or products.

Hazardous waste
The mineral hazardous waste and recovery treaties include outright bans on imports and exports of hazardous wastes. The well known Bamako Convention bans imports into Africa and the South Pacific Islands states, but allows states in each region to trade with each other, subject to certain controls. The 1989 Lomé Convention bans exports from the EU to the African, Caribbean and Pacific States parties, except if the importing country has adequate facilities.