



ENGINEERING SOLUTIONS FOR SUSTAINABILITY:
MATERIALS AND RESOURCES 3

Toward a Circular Economy

February 18–19, 2017 | Denver, Colorado

Session #2: CASE STUDIES: CHALLENGES & SUCCESSFUL BUSINESS MODELS

The Model Mine Development Agreement (MMDA) and sustainability in mining

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International Bar Association

Mining Law Committee

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PROCESS:

- Recognized need for guidance on mining agreements (post-exploration phase) between governments without mature mining codes and mining companies wanting to construct operating mines
- Collected 80+ existing Mine Development Agreements
- Deconstructed and analyzed common provisions
- Assembled example provisions and drafted generic provisions



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GOAL: To Provide

- A template for agreements with state owned mining enterprises
- An agenda for mine development negotiations based on a sustainable development objective
- A guide where the mining code must be supplemented by private agreement
- A tool for use in drafting mining agreements



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TENURE

- 2.0 Development of Mining Area
- 2.1 Term of this Agreement
- 2.2 Exclusivity
- 2.3 Legal Title to Minerals
- 2.4 Obligations Prior to Construction
 - 2.4.1 Feasibility Study
 - 2.4.2 Environmental Assessment and Environmental Management Plan
 - 2.4.3 Social Impact Assessment and Action Plan
 - 2.4.4 Financing Plan
 - 2.4.5 Compliance with Law; Requested Changes by State
- 2.5 Requirement to Obtain Permits



2.4.3 Social Impact Assessment and Action Plan

- The Company shall have a Social Impact Assessment and Action Plan prepared with guidance from the IFC Performance Standards (and updated prior to any major change to the mine plan), which shall include [elements as the Parties may agree, such as the following] [the following elements and appropriate provisions for implementing the requirements of Sections 20.0, 21.0, 22.0, 23.0, 24.0, and 25.0 of this Agreement_____]:



- **Example 1**
Social Impact Assessment and Social Action Plan.
- *The Concessionaire shall conduct an SIA and produce an SAP in accordance with the Bid Materials. The SIA shall set forth the potential adverse impact of the construction and operation of the Mining Plant and the Infrastructure on the individuals and communities resident in and around (a) such Proposed Production Area and any Mining Plant or Infrastructure not located on such Proposed Production Area, or (b) areas affected by the proposed processing or transport of Product whether using Concessionaire-provided Infrastructure or equipment or facilities or equipment provided by the Government or third parties.*



- **Example 2**
Social Undertakings.
- *(a) [COMPANY] shall perform its obligations and operate the Project in accordance with its corporate sustainability policy, which is based on the cornerstone principles of corporate commitment, public responsibility, social progress, environmental stewardship and economic benefits. [COMPANY], through a sustainable development project, shall make contributions for the improvement of the life quality of the community.*



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RIGHTS AND OBLIGATIONS

- 10.0 Mutual Obligations
 - 10.1 Information to Local Government
 - 10.2 Applicability of IFC Performance Standards and Equator Principles
 - 10.3 Parties' Commitment to Protecting Human Rights
 - 10.4 Prevention of Corruption



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10.2 Applicability of IFC Performance Standards and Equator Principles

- Where Applicable Law and regulations on environmental and social impact assessment and management, and pollution prevention are less stringent than the IFC Performance Standards, the Company shall undertake its activities in a manner consistent with the IFC Performance Standards.
- <http://www.ifc.org>



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Example 4

21.2 Human Rights Instruments

The Company acknowledges its responsibility to respect human rights as set out in:

- (a) The Universal Declaration of Human Rights;*
- (b) The International Covenant on Civil and Political Rights;*
- (c) The International Covenant on Economic, Social and Cultural Rights;*
- (d) The International Convention on the Rights of the Child;*
- (e) Convention on the Elimination of all Forms of Discrimination against Women;*
- (f) Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment;*
- (g) The Indigenous and Tribal Peoples Convention (ILO No. 169);*
- (h) The International Convention on the Elimination of all Forms of Racial Discrimination; and*
- (i) All international human rights instrument to which the State is a party*



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- MMDA 2.0?
- MMDA 1.0 is six years old – an update has been proposed.
- Will international norms be developed for the circular economy?
- If so will mining agreements reflect those norms and require compliance?



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Where does mining fit in a circular economy?

- Higher prices create incentives to recycle materials
- For materials like coal, there is no way to recycle and re-use
- But most of the gold, or copper, or aluminum ever produced is still in use and can – if recycling is improved – remain so.

Breaking New Ground: Mining and Sustainable Development (2002):



- Mining fills the gap between demand and recycled supply
- International Council on Mining & Metals 2006 declaration:

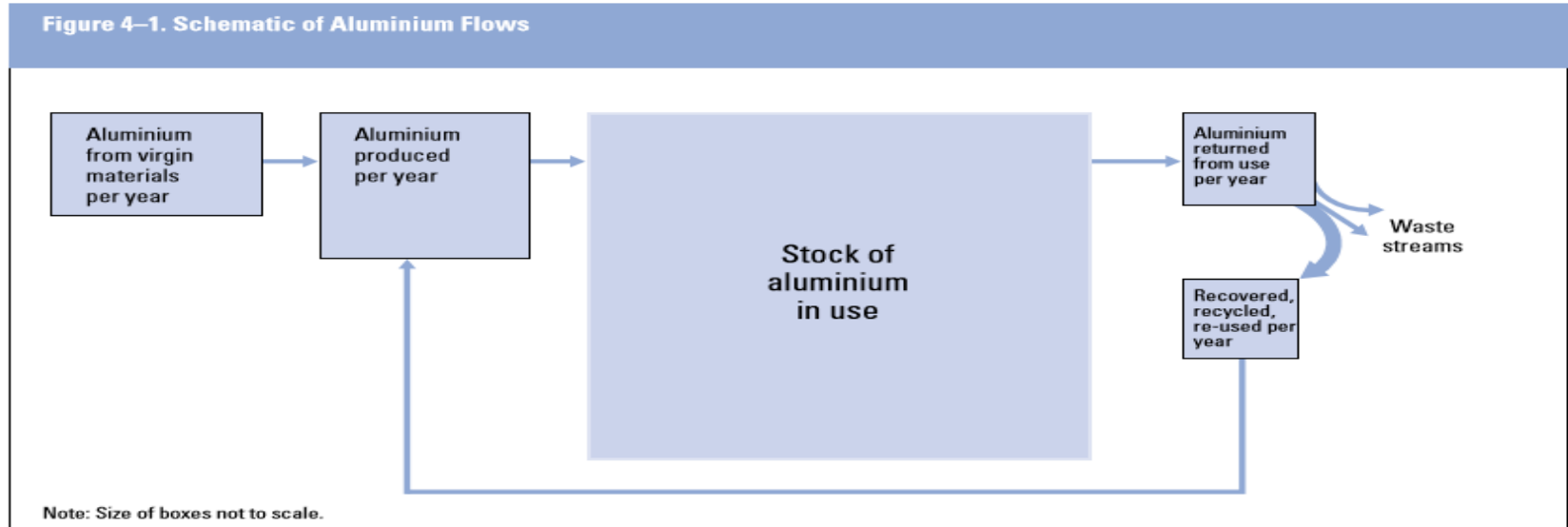
“Primary metal production fills the gap between the availability of secondary material and total demand.”



- In 2014 Boeing's closed-loop efforts were expected to recover 10 million pounds for titanium and 19 million pounds for aluminum
- Airbus demonstrated the recyclability of A300 wings and cockpit parts with a recovery yield of over 90%,
- There are an estimated 6,000 aircraft scheduled for retirement over the coming two decades



Figure 4–1. Schematic of Aluminium Flows





THANKS!!

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