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# MINING

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# Setting the Scene - production

As of March 2009,

Asian region accounts for 28.5% of the world bauxite production, 82.5% of the world mine production of antimony, 19.8% of copper, 23.8% of gold, 53.4% of lead, 41.3% of molybdenum, 29.1% of nickel, 79.1% of tin, and 42.3% of zinc.

The Pacific contributes 33% to the world bauxite production, and 14% to the gold production.

With respect to uranium, as of 2008, Australia is a major producer of uranium with the share 19.2% of the world production, followed by Kazakhstan with 19.4% and Uzbekistan of 5.3%.

[Calculation based on the World Bureau Metal Statistics \(2009\) World Metal Statistics, July 2009, vol.62, no. 7, Ware, Herts, UK.](#)

 *The region is endowed with rich mineral resources.*

# Setting the Scene - society

- It is asserted that the gold mining is globally the second-worst source of mercury pollution, and the continued use of mercury threatens people all over the world since mercury is a global air pollutant (Blacksmith Institute, 2008) .
- Public awareness about the issues surrounding mineral development has increased rapidly since the early 1990s, with governments and mining companies coming under increasing pressure to be accountable for pollution and violation of people's rights.
- “while our rights to livelihood, movement and self-determination are being systematically violated the 'rights' of commodity, capital and multinational corporations are instead being established. This is not acceptable to us”
  - Artisanal gold mining is associated with mercury contamination.
  - Anti-mining campaigns are increasingly forceful and globally networked.

## Setting the scene: change in companies

There is growing acceptance by mining companies that mining projects have economic, social and environmental impacts on the community and there may be significant business advantages associated with early community engagement.

In spite of such progress, there still seems to be mismatch between growing societal expectations on mining firms' good practice and their willingness, or capacity, to deliver on these expectations.

## JPOI Paragraph 46, Chapter IV

46. Mining, minerals and metals are important to the economic and social development of many countries. Minerals are essential for modern living.

Enhancing the contribution of mining, minerals and metals to sustainable development includes actions at all levels to:

(a) Support efforts to address the environmental, economic, health and social impacts and benefits of mining, minerals and metals throughout their life cycle, including workers' health and safety, and use a range of partnerships, furthering existing activities at the national and international levels among interested Governments, intergovernmental organizations, mining companies and workers and other stakeholders to promote transparency and accountability for sustainable mining and minerals development;

# JPOI

(b) Enhance the participation of stakeholders, including local and indigenous communities and women, to play an active role in minerals, metals and mining development throughout the life cycles of mining operations, including after closure for rehabilitation purposes, in accordance with national regulations and taking into account significant transboundary impacts;

(c) Foster sustainable mining practices through the provision of financial, technical and capacity-building support to developing countries and countries with economies in transition for the mining and processing of minerals, including small scale mining, and, where possible and appropriate, improve value -added processing, upgrade scientific and technological information and reclaim and rehabilitate degraded sites.

# How to show good mines: small scale

ASM remains for further actions, including human rights, indigenous group, child labor, women, fair trade, education, train the trainers, pollution control, safety, and so on.

➔ An ethical jeweller was launched in Tokyo in 2009. Small firms (on consumer side) based on green policy and fair trade could change the feature of mining sector.

➔ Ethics should be pivotal for the development of ASM.



*Photo courtesy, HASUNA Co., Ltd.*

# How to realize good mines: large scale

Investments are becoming environmentally and socially responsible when investors exert pressure. In 2006, a pension fund blacklisted a mining company.

→ Investors, civil society and companies should interact more, deepen the thoughts and seek for better modus operandi.

In order to secure sustainable development of the society, it is inevitable to promote recycling of mineral-based materials to prolong their useful life in the life cycle.

→ Advanced technologies such as urban mine, LCA and approaches like industrial symbiosis seem to be promising in establishing mining towns acceptable in Asia and the Pacific.



# Eco Town

A best practice in terms of industrial symbiosis is Japan's "Eco-Town Program" which tries to maximize the economic and environmental benefit from close geographic proximity of industrial and urban areas, through the use of previously discarded commercial, municipal and industrial waste materials in industrial applications.

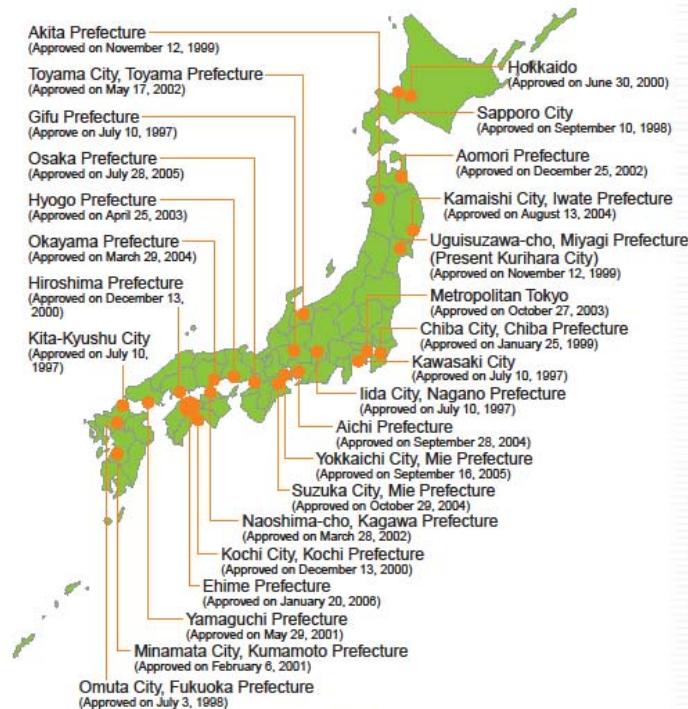
➔ If introduced in accordance with each country's context, such best practice will bring the Asia-Pacific region a bright future.

Source: METI, 2006

## Approved Eco-Town Areas

The Ministry of Economy, Trade and Industry and the Ministry of Environment approved Eco-Town Plans for 26 areas as of the end of January 2006, and they provided financial support to 62 facilities located within the appropriate areas.

The Case Introduction reports the present situation of Eco-Town projects based on information gathering from local authorities and major facilities (business firms) in the 26 areas. Referencing materials describing profiles of Eco-Town Plans of the local authorities are attached at the end of the book.



## For further consideration - Geoethics

It should be reminded that indigenous knowledge on local mining and environmental conservation have been historically proved to be efficient, sustainable, diverse and grounded on the collective community ethics and responsibility.

It is needed to establish a method not to erode traditional system and values, and to incorporate them in the modern mining management.

In this context, the author suggests that a concept “geoethics” could help us to design appropriate industries for the sustainable development.

# For further consideration - Geoethics

**Geoethics** was formerly promoted in 1991 as a new discipline in the framework of Earth Sciences, linking **Ethics and Geology**, and involving scientific and societal aspects from theoretical and practical approaches.

The institutionalisation of geoethics was established in 2004 by forming a working group for geoethics with the backing of the Association of Geoscientists for International Development (AGID) under IUGS.

We need a blending system of virtue, moral and modern business to design eco-friendly infrastructure; to select harmonizing technology with nature and people; and to adopt sound management to protect the environment, tradition and culture.