JICA’s Assistance for Africa in Mining Sector

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• About JICA
• Past and current activities for Africa
• JICA’s strategy and future activities for Africa
• Human Resource Development
• Mine Safety and Environment in the African Area
About JICA (1/3)

- ODA is broadly divided into bilateral aid and multilateral aid.
- JICA provides bilateral aid in the form of Technical Cooperation, ODA Loans and Grant Aid.
JICA Overseas Offices

- Around 100 offices are located worldwide, and 34 offices in Africa.
Division of work of Japanese institutions in mining sector

**Planning, legal system**
- Region-wide RS survey
  - JOGMEC
- Geological survey (public-private joint project by JV)
  - JOGMEC
- Support to environmental measures
  - JOGMEC
- DP, TC, Training in Japan (Development of legal system and other systems, enhancement of administrative function, etc.)
  - JICA
- DP, TC, Training in Japan (Legal survey, basic survey, RS analysis, development/enhancement of systems, creation of the GIS, mineral resource control, etc.)
  - JICA

**Exploration stage**
- Fund for exploration, mining zone acquisition
  - Capital injection, loan
  - JOGMEC
- Technical survey, F/S evaluation
  - JOGMEC

**F/S (private)**
- Purchase of interests (Junior)
  - JOGMEC
- Mines and surrounding infrastructure: F/S survey
  - METI
- Support to environmental measures
  - JOGMEC
- DP, TC, Training in Japan (Provision of advice on the environment and permission/authorization to the government, etc.)
  - JICA

**Approval, Determination stage**
- Preparatory Study
  - JICA
- DP, TC, Training in Japan (Support to the development of surrounding infrastructure, etc.)
  - JICA

**Development construction work stage**
- Development Fund
  - Loan guarantee
  - JOGMEC
  - Loan: JBIC
  - Insurance: NEXI
- Production technology
  - F/S evaluation
  - Joint study
  - JOGMEC
- Purchase of mines under development or production
  - Capital injection: JOGMEC
  - Loan: JBIC
  - Insurance: NEXI

**Operation stage**
- Private Sector Investment Finance
  - JICA

**Mine-closing stage**
- Mines and surrounding infrastructure: F/S survey
  - METI
- Support to environmental measures
  - JOGMEC
- DP, TC, Training in Japan (Development of laws, instruction to legal enforcement, technical instruction, mine-closing plan, redevelopment plan, etc.)
  - JICA

**About JICA (3/3)**
(japanese characters and descriptions)

(Abbreviated term)
- DP: Technical Cooperation for Development Planning
- TC: Technical Cooperation Projects
## JICA’s past activities for African mining sector (1/2)
### “Technical Cooperation”

### Coal

<table>
<thead>
<tr>
<th>Country</th>
<th>Project name</th>
<th>Duration</th>
<th>Scheme</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWAZILAND</td>
<td>The Pre-Feasibility Study for the Lubhuku Coal Development Project</td>
<td>1983-1986</td>
<td>Development Study</td>
</tr>
<tr>
<td>MALAWI</td>
<td>Invention on Development Project of Ngana Coalfield</td>
<td>1977-1978</td>
<td>Development Study</td>
</tr>
</tbody>
</table>

### Oil

N/A

### Natural Gas

N/A

### Metallic mineral resources

<table>
<thead>
<tr>
<th>Country</th>
<th>Project name</th>
<th>Duration</th>
<th>Scheme</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANGOLA</td>
<td>Capacity Building of Institute of Geology (IGEO) of ANGOLA</td>
<td>2012-2013</td>
<td>Expert/Training</td>
</tr>
<tr>
<td>ZAMBIA</td>
<td>Capacity Building in GIS Database Management</td>
<td>2010-2011</td>
<td>Expert</td>
</tr>
<tr>
<td>MALAWI</td>
<td>Senior Volunteer</td>
<td>2008-2011</td>
<td>Volunteer</td>
</tr>
<tr>
<td>MADAGASCAR</td>
<td>Geological mapping and mineral information system project for promotion of mining industry</td>
<td>2008-2011</td>
<td>Development Study</td>
</tr>
<tr>
<td>ZAMBIA</td>
<td>Geological Mapping and Mineral Information Service Project for Promotion of Mining Industry</td>
<td>2007-2010</td>
<td>Development Study</td>
</tr>
<tr>
<td>MAURITANIA</td>
<td>Strategic Plan Survey of Mineral Resources</td>
<td>2003-2005</td>
<td>Development Study</td>
</tr>
<tr>
<td>ZAMBIA</td>
<td>A Pre-Feasibility Study for the Phosphate Development Project</td>
<td>1984-1985</td>
<td>Development Study</td>
</tr>
<tr>
<td>UGANDA</td>
<td>The Rehabilitation Study of Kilembe Mines and Jinja Smelter Plant</td>
<td>1980-1981</td>
<td>Development Study</td>
</tr>
<tr>
<td>TANZANIA</td>
<td>Pre-Feasibility Study on Natural Soda Development in Lake Natron Related Transportation Facilities</td>
<td>1975-1976</td>
<td>Development Study</td>
</tr>
</tbody>
</table>

※Activities since 1974

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### Cooperative Mineral Exploration

※Implemented by JICA with subcontracting to MMAJ (Metal Mining Agency of Japan) from 1970 to 2003

<table>
<thead>
<tr>
<th>Country</th>
<th>Survey area</th>
<th>Duration</th>
<th>Surveyed Metals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethiopia</td>
<td>Western area</td>
<td>1972-1973</td>
<td>cancel</td>
</tr>
<tr>
<td>Democratic Republic of the Congo</td>
<td>Southern Shaba area</td>
<td>1971</td>
<td>Copper</td>
</tr>
<tr>
<td>TANZANIA</td>
<td>Southern Lake Victoria area</td>
<td>1995</td>
<td>Gold</td>
</tr>
<tr>
<td>BOTSWANA</td>
<td>Northeastern area</td>
<td>1979-1982</td>
<td>Copper, Chromium</td>
</tr>
<tr>
<td>MADAGASCAR</td>
<td>Southern area</td>
<td>1991-1993</td>
<td>Gold, Silver, Copper</td>
</tr>
<tr>
<td>MALAWI</td>
<td>Chilwa Alkaline area</td>
<td>1986-1988, 1989</td>
<td>Rare Earth</td>
</tr>
</tbody>
</table>
JICA’s current activities for African mining sector

8 African Countries Data Collection and Confirmation Study on the Mine Environment and Safety in the African Area (2013FY)  
(Data Collection Survey)

Capacity Building of Institute of Geology (IGEO) of ANGOLA (2012-2013)  
(Expert/Training)

(Technical Cooperation Project)

≪Group Training Course in Japan≫ (2012-2014)  
(Implementing Partner: International institute for mining technology (MINETEC))

①Enhancement of Geological Information System for Minerals with Modern Techniques in Africa (for African Region)  
【2013 Target Countries】
Malawi, Namibia, Tanzania, Mozambique, Democratic Republic of the Congo, Sudan, Nigeria, Uganda

②Sustainable Mining Development (for All regions)

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Explanation of data process of satellite data in Malawi
Field Training (obtaining GPS data) in Malawi
JICA’s strategy for mining sector

Strategic Target:
(1) Investment Climate and Infrastructure Development
(2) Human Resource Development

- Risk mitigation is needed in mining sector

Source: Ernst & Young, Business risks facing mining and metals 2013 - 2014

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Risks in 2013 were changed from 2008.
Tendency of risks became in capital and benefits, because of price softening.
The issues of skills, infrastructure, and nationalism have been in high focus.
Common Challenge on Mine Development in Africa (from “Africa Down under 2012”)

Common Points of Mining Policy in Southern & Western Africa

1. Realize Industry Development and Economy Development by Mine Development
2. Mine Development should be done by Private Sector.
3. Mine Development needs promoting Foreign Investment.
4. Promoting Foreign Investment needs attractive Mining Investment Law and Geological Exploration Information.
5. Local Enterprises and Local Community should join in Mine Development and get allocation of profit.
6. Tendency to heighten the Added Value (from Mine Development to Manufacture, from Primary Material to Final Product)
7. Infrastructure Building
8. Human Resources Development

Essential issue
“Attractive Law and Regulation”, “Adequate Geological Exploration Information”, “Appropriate Infrastructure” and “Developed Human Resources”
JICA’s Strategy in Mining Sector

JICA’s Four Pillars

Pillar I
- Infrastructure and Regional Development

Pillar II
- Policy Support and Legal System Development

Pillar III
- Mineral Resource Management

Pillar IV
- Mine Safety and Environmental Measures for Mines
JICA Strategy in Mining Sector

I

Infrastructure and Regional Development

- Developing infrastructure; electricity, water and transportation
- Developing communities around mines
- Regional promotion, and measures for closing or closed mines, etc.
JICA Strategy in Mining Sector

II

Policy Support and Legal System Development

• Formulating mining sector master plan
• Organizing the laws and regulations related to mining exploration development, etc.
• Human resource development
JICA Strategy in Mining Sector

III

Mineral Resource Management

• Better estimation by advanced technology
• Establishing appropriate management systems, etc.
• Human resource development
JICA Strategy in Mining Sector

IV

Mine Safety and Environmental Measures for Mines

• Improving technology for mine pollution prevention and environmental restoration
• Organizing the law related to mine safety
• Human resource development
Next activities by JICA for African mining sectors

- Enhancing human resource development
  
  *African Business Education Initiative for Youth (ABE Initiative)*

- Enhancing mine safety and environment
African Business Education Initiative for Youth (ABE Initiative)

ABE Initiative will be launched and included

• **Maser’s degree program** in Japanese universities and **Internship program** in Japanese enterprises
• Invite 1,000 African youth to Japan during 5 years from 2014
• Many areas and vocations from the age 22 to 39
Enhancing human resource development

**ABE Initiative**

**Akita University**

*National Center of Research and Education on Resource Sciences*

**Postgraduate level education in Japan:**
Akita University and others
For Government officers and Public servants

**Education and research in Africa:**
Hokkaido University, Akita University, Waseda University, Kyoto University, Kyushu University and others
For Academic persons
Enhancing human resource development

**ABE Initiative**

- **Postgraduate level training in Japan**
  ⇒ JICA has the scheme of postgraduate level educations for government officers and public servants of African countries.

- **Education and research in Africa**
  ⇒ JICA has the scheme of assistance to mining schools and universities in Africa for upgrading local human resources and enhancing research activities.
JICA conducts survey on “Mine Safety” and “Environmental Measures for Mines” in African countries from this fiscal year.

Series of field survey and data collection will be done in several countries for preparation of JICA’s future cooperation.

Technical cooperation will be conducted in someplace in the future.
Data Collection Survey on Mine Safety and Environment in Africa

Period: October/2013 - March/2014 (6 months)
Content of the Study:

1) Preparation works in Japan
2) First site investigation (8 countries)
3) Analysis works in Japan
4) Second site investigation (Selected areas)
5) Compilation works in Japan
Data Collection Survey on Mine Safety and Environment in Africa

Study Area

Objective Countries

- Angola
- Zambia
- Malawi
- Mozambique
- Zimbabwe
- Namibia
- Botswana
- South Africa
- Madagascar
- Lusaka
- Bulawayo
Enhancing mine safety and environment

• JICA will consider and prepare future cooperation projects in respect of this field
• Implementation of the projects will be followed after preparation.
JICA’s Technical Cooperation Scheme

- **Target:**
  Governmental/Public Organizations

- **Concept:**
  Enhancing problem-solving capacities of the partner countries

- **Input from Japanese Side:**
  
  - **Training Program in Japan**
    - Short-Term Training (1-3 months)
    - Long-Term Training (2-5 years) at graduate school in Japan
  
  - **Dispatch of Japanese experts** to support and advise;
    - to strengthen the Capacity
    - to strengthen the Governmental / Institutional system

  - **Provision of Equipment**
    - to improve facilities for capacity development
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Energy and Mining Division II
Industrial Development and Public Policy Department,
JICA HQ, Tokyo, JAPAN
Arigato gozaimashita
Asante Sana
Thank you very much
Merci beaucoup
Obrigado
Muchas gracias