China Action: to Update Chinese Bridging Documents and Facilitate Global Sustainable Resources Development

By JU Jianhua

Ministry of Natural Resources of the People’s Republic of China

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Main Responsibilities of the Ministry of Natural Resources of the People’s Republic of China (MNR), is to regulate the development, utilization and protection of natural resources; establish a spatial planning system and supervise its implementation; enforce ecological protection and rehabilitation; act as public owner of all kinds of natural resources; unify various surveys and right-confirmation registrations; establish a paid system to utilize natural resources; and administer the surveying, mapping and geological exploration sectors.
OUTLINE

I. Overview

II. Recent Progresses

III. Next Step
1. Adhering to the vision of green development, China is ready to deepen cooperation globally and contribute to a harmonious planet

- China is rich in mineral resources, there are 23 major minerals rank top ones on reserves and 33 rank first on output in the world, has contributed greatly to the global mining industry.

## World rankings of the China's major mineral reserves

<table>
<thead>
<tr>
<th>Rank</th>
<th>Major Minerals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ilmenite, vanadium, tungsten, tin, molybdenum, antimony, bismuth, rare earth, indium, selenium, strontium</td>
</tr>
<tr>
<td>2</td>
<td>lead, zinc, magnesium, lithium, phosphorus, fluorite, diatomite</td>
</tr>
<tr>
<td>3</td>
<td>coal, graphite</td>
</tr>
<tr>
<td>4</td>
<td>iron, potash, barite</td>
</tr>
</tbody>
</table>

## World rankings of the China's major mineral consumption

<table>
<thead>
<tr>
<th>Rank</th>
<th>Major Minerals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>total energy resources, coal, iron, manganese, chromium, titanium, vanadium, copper, aluminum, lead, zinc, nickel, tungsten, tin, molybdenum, antimony, bismuth, magnesium, cobalt, gold, silver, platinum, rare earth, lithium, niobium, tantalum, zirconium, hafnium, selenium, phosphate rock, potash, sulfur, ore, graphite, fluorite, cement, etc.</td>
</tr>
<tr>
<td>2</td>
<td>fossil oil, beryllium, palladium, gallium, barite, etc.</td>
</tr>
<tr>
<td>3</td>
<td>natural gas, germanium, etc.</td>
</tr>
<tr>
<td>4</td>
<td>indium</td>
</tr>
</tbody>
</table>

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Proportion of global primary energy consumption

- China: 23%
- USA: 17%
- EU: 12%
- Others: 34%
- Russia: 5%
- India: 6%
- Japan: 3%
1. Adhering to the vision of green development, China is ready to deepen cooperation globally and contribute to a harmonious planet

- China attaches great importance to ecological civilization and sustainable development, and stands ready to abide by the new development idea of innovation, coordination, green, opening and sharing, and contribute to a beautiful and harmonious world.

- **2012**: 18th National Congress, the ecological civilization construction was integrated into the ‘Five-sphere integrated plan’;
- **2015**: 5th Plenum of the 18th CPC Central Committee put forward five new development concepts;
- **2017**: 19th National Congress it was put forward that construction of ecological civilization is a thousand-year plan for Chinese nation's development
- **2018**: Ecological Civilization was included firstly in the Constitution Amendments.

Actively further consolidate and develop practical cooperation with relevant countries in the field of mining by international exchange platforms, China Mining Conference, China-ASEAN MCF, Lancang-Mekong Countries GCF and B&R ICMIF.
2. Long-term cooperation with UNECE and obtained great achievements

(1) Assigned experts to actively participate in EGRM and contribute to the development and application of UNFC/UNRMS

- Since 1995, China has taken an active part in the development of the UNFC 1997;
- Assigned experts regularly to the EGRM meetings and has invited UNECE officials to visit China on many occasions.
2. Long-term cooperation with UNECE and obtained achievements

Conduct joint study on mapping resource standards, and issued the bridging documents between Chinese systems and UNFC in 2018.
2. Long-term cooperation with UNECE and obtained achievements

(3) Joint study on case studies for the application of Chinese Bridging Documents (2020)

- Typical gold, coal and iron mines were identified (at production stage)
2. Long-term cooperation with UNECE and obtained achievements

◆ Typical oil and gas fields were identified for full life-cycle case study

Example: a typical Gas Field for case study of Chinese petroleum Bridging Document
2. Long-term cooperation with UNECE and obtained achievements

（4）Co-organized meetings to achieve consensus and promote the concept, technology and experience for sustainable resource development.
OUTLINE

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II. Recent Progresses

1. MNR has engaged actively to promote the practical application of Chinese Bridging Documents

- Deepen case studies continuously;
- Strengthen training and dissemination for further application of Chinese Bridging Documents in the practice;
- Sponsor specific projects on updating of bridging documents, digital tool and EGRM activities;
- Made efforts together to explore opportunities for international cooperation on UNFC’s application, particularly in B&R related projects, enabling the interconnection of resource standards.
II. Recent Progresses

Petroleum: typical oil fields and normalized cases

Mapping Results

<table>
<thead>
<tr>
<th>EOR Project</th>
<th>Discovered</th>
<th>Measured PIIP</th>
<th>Proved TUR</th>
<th>Proved EUR</th>
<th>Proved Developed EUR</th>
<th>Production</th>
<th>Proved Developed Reserves</th>
<th>Proved SER</th>
<th>Proved UQ</th>
<th>Estimates (10^8 m³)</th>
<th>UNFC Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>GB/T 19492</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>672.0</td>
<td>273.2</td>
<td>355.0</td>
<td>669.8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


II. Recent Progresses

2. Developed the drafts of Chinese Bridging Documents for reviewing
II. Recent Progresses

3. Provided continuous professional supports for UNFC documents.
II. Recent Progresses

4. Developed UNFC-UNRMS Toolkit to support the application of Chinese Bridging Documents and integrated studies

◆ Serving for dynamic management of resources within whole life cycle and working platform
5. Successfully held joint UNFC Session with UNECE, CCOP and IUGS in Beijing last year and contributing together to global recovery from the epidemic.

Explore a new normal for EGRM events: UNFC Sessions, sharing new concepts & technologies of sustainable resource management
OUTLINE

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III. Next Step

1. Collaborate with TAG to facilitate the update of China's Bridging Documents;

2. Promote the cooperation projects with UNECE and the ICE-SRM in China supporting global application of UNFC/UNRMS;

3. Conduct extensive collaboration and cooperation with other countries and continuously contribute to the global sustainable resources development.
Thank You!

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