THE GOBI DESERT
A SITE OF EXTENDED URBANIZATION?

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URBAN THEORY LAB, FINAL REVIEW
SPATIAL IDEOLOGIES, CULTURAL IMAGINARIES
GOBI AS WASTELAND/VOID
GOBI AS ROMANTICIZED NOMADIC SPACE
GOBI AS TRANSITIONAL SPACE
GOBI AS SITE OF RESOURCE EXTRACTION
GOBI AS SITE OF STRUGGLE AND DISPLACEMENT
GOBI AS DEGRADED, THREATENING “OTHER”
CITY

THE SITE OF ANALYSIS WITHIN TRADITIONAL URBAN STUDIES
FLOW OF IMPACTS FROM THE CITY TO THE NON-CITY
FLOW OF RESOURCES FROM THE NON-CITY TO THE CITY
DIALECTICAL FLOW OF IMPACTS/RESOURCES BETWEEN CITY AND NON-CITY
CASE STUDY: GOBI-BEIJING RELATIONSHIP
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GUIDING QUESTION:
IS BEIJING GOBI?
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IS GOBI BEIJING?
A FOCUS ON TWO KEY PROCESSES OF EXTENDED URBANIZATION IN THE GOBI:

1. RESOURCE EXTRACTION AND ASSOCIATED INFRASTRUCTURES

2. DESERTIFICATION, DEGRADATION AND LAND RECLAMATION STRATEGIES

BOTH PROCESSES DEMONSTRATE EVOLVING DYNAMICS OF PLANETARY URBANIZATION
PROCESS 1: RESOURCE EXTRACTION AND ASSOCIATED INFRASTRUCTURES
INDUSTRIAL DEVELOPMENT
DURING MAO ERA, 1949-1968

Gobi region is currently the most coal-rich in China
MAOIST ANTI-URBAN IDEOLOGY

毛主席视察广东农村
MAOIST ANTI-URBAN IDEOLOGY
MARKET REFORM ERA, INITIATED BY DENG XIAOPING IN 1978
EXPANSION OF MINING INDUSTRIES TO FUEL URBANIZATION POST-1978
EXPANSION OF NETWORKS TO SUPPORT EXTRACTIVE INDUSTRIES
Rail network and cities in China, 1936

EXPANSION OF NETWORKS TO SUPPORT EXTRACTIVE INDUSTRIES
EXPANSION OF NETWORKS
TO SUPPORT EXTRACTIVE INDUSTRIES

Rail network and cities in China, 1985
Rail network and cities in China, 2000

EXPANSION OF NETWORKS TO SUPPORT EXTRACTIVE INDUSTRIES
EXPANSION OF NETWORKS TO SUPPORT EXTRACTIVE INDUSTRIES

G6 and G7 expressways through the Gobi are highlighted below
MONGOLIA: FROM PLANNED ECONOMY TO CAPITALIST DEMOCRACY
DEVELOPMENT OF MINING INDUSTRIES IN POST-SOCIALIST MONGOLIA

<table>
<thead>
<tr>
<th>Project</th>
<th>Stage</th>
<th>Resource (Mt)</th>
<th>Cu %</th>
<th>Au g/t</th>
<th>Est Capex</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oyu Tolgoi</td>
<td>Commissioning</td>
<td>4,492</td>
<td>0.87</td>
<td>0.35</td>
<td>US$10bn</td>
</tr>
<tr>
<td></td>
<td>including Open Pit</td>
<td>955</td>
<td>0.49</td>
<td>0.36</td>
<td>US$6bn</td>
</tr>
<tr>
<td>Tsagaan Suvaraa</td>
<td>Construction</td>
<td>240</td>
<td>0.53</td>
<td>n/a</td>
<td>US$1bn</td>
</tr>
<tr>
<td>Kharmagtai</td>
<td>Feasibility Studies</td>
<td>87</td>
<td>0.40</td>
<td>0.44</td>
<td>n/a</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project</th>
<th>Stage</th>
<th>Resource (Mt)</th>
<th>Cu %</th>
<th>Mo %</th>
<th>Annual Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erdenet</td>
<td>Production (since '78)</td>
<td>2,370</td>
<td>0.38</td>
<td>0.013</td>
<td>26Mt @ 0.54% Cu</td>
</tr>
</tbody>
</table>

Source: Metals Economics and company data

Notes:
1. Resources inclusive of Reserves
2. Estimated investment for Stage 1 Open Pit operations at OT is US$6 billion with a further US$4 billion expected to be raised 1H'13 to fund the underground development. Open pit reserves are 955Mt @ 0.49% Cu & 0.36g/t Au
3. Estimated capex for Tsagaan Suvaraa by EBRD in Oct’11 was US$869 million
MINING SETTLEMENTS: A DE-LOCALIZED URBAN FABRIC
MINING SETTLEMENTS: A DE-LOCALIZED URBAN FABRIC
THE MONGOLIAN GOVERNMENT’S PLANS FOR TRANSPORT INFRASTRUCTURE IN THE SOUTH GOBI

GOBI-BEIJING TRAFFIC JAM, 2011
GROWTH OF INFORMAL ROAD NETWORKS BETWEEN CHINA AND MONGOLIA
GROWTH OF INFORMAL ROAD NETWORKS BETWEEN CHINA AND MONGOLIA
Ghost town of Erenhot, China

“BORDER URBANIZATION”
LAND ENCLOSURE AND INTENSIFICATION OF AGRO-PASTORAL PRACTICES IN INNER MONGOLIA, CHINA
LAND ENCLOSURE AND INTENSIFICATION OF AGRO-PASTORAL PRACTICES IN INNER MONGOLIA, CHINA
Figure 3. Distribution of contemporary desertification in China separated into actual and potential categories (Source: modified from Zhu, 1992).
DUST STORMS IN CHINA

HIGH WINDS RAISE DUST

DESERT

CHINA

DUST FANS OUT DOWNWIND
DUST STORMS IN BEIJING
THE GREEN WALL OF CHINA
“CONTROLLING A GRAIN OF SAND IN DUOLAN, ACHIEVING A PIECE OF BLUE SKY IN BEIJING.”
—SLOGAN OF LAND RECLAMATION EFFORTS IN INNER MONGOLIA
IS BEIJING GOBI?
IS GOBI BEIJING?

NON-CITY

BLURRED BOUNDARIES... BLURRED CONCEPTS

URBAN BUFFER ZONE – OPERALIZATION OF THE LANDSCAPE

CITY