

# **Gateway database to the Natural resources and Environmental information in Mongolia**

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# Introduction

**In globalization era, countries of the World are provided with a great opportunity for cooperating in**

- building the capacity of the country**
- overcoming the constraints facing to food supply and food security due to information technology.**

**Using websites, countries are open to sharing their information, experience on particular subjects, especially making solutions on natural resources today.**

**Recently Eco Asia institute has established the Gateway database to natural resources and environmental information, particularly land and water resources of Mongolia in cooperation with UN/FAO in 2004.**

The ***purpose*** of Gateway database to Mongolia is to provide information on the state, condition and trends of rural land and water resources of Mongolia.

The ***objective*** of Gateway database is to promote improved and expanded knowledge of researchers and decision making for sustainable use of agricultural natural resources of the country.

# **Welcome to MONGOLIAN GATEWAY DATABASE**

**[http://www.fao.org/ag/agl/swlwpnr/  
reports/y\\_ea/z\\_mn/mn.htm](http://www.fao.org/ag/agl/swlwpnr/reports/y_ea/z_mn/mn.htm)**

# Objectives

The main objectives of the presentation are to introduce about Mongolian Gateway database on environment and natural resources and to use some information of Gateway database for RAISE project

# Specific objectives of Gateway database

- to provide with the reliable and accurate information on natural resource including land, water and economy of Mongolia in implementing process of the project RAISE and
- to assist the implementation of one of the specific goals to establish and strengthen the network of the Early Warning Systems for drought of the TPN5 programme “Strengthening Capacity for Mitigating Drought Impact & Desertification Control” of UNCCD implemented by the nodal institute ECO ASIA.

# **Gateway database of Mongolia is a dynamic internet-based network.**

**This database includes**

- environmental data and information**
- results of long term research and scientific works/surveys**
- additionally statistical data with their sources respectively.**

# The Mongolian GATEWAY database consists of 8 sections:



- *Country overview* 
- *Land resource*
- *Water resources* 
- *Plant nutrition resources* 
- *Hot spots* 
- *Bright spots* 
- *Challenges and viewpoints* 
- *References and related internet links* 



**Country overview** includes the background information on Mongolia's geographical location and social and economic features, especially on Mongolian climate.

Mongolia lies in the heart of the Central Asia, neighboring with Russia along 3485 km in the north and with China along 4676.9 km in the south.

Mongolia has a population of 2.5 million people. The economic reforms and privatization process initiated in the early 1990s have significantly affected Mongolia's economy. GDP per capita was around 500US\$ in 2003.

The Mongolian climate characterizes by long lasting cold winter, cool summer, small precipitation, high temperature contrast/fluctuation and relatively high number of sunny days a year.

# N Asia



- 1. KUWAIT
- 2. BAHRAIN
- 3. QATAR
- 4. UNITED ARAB EMIRATES
- 5. TURKMENISTAN

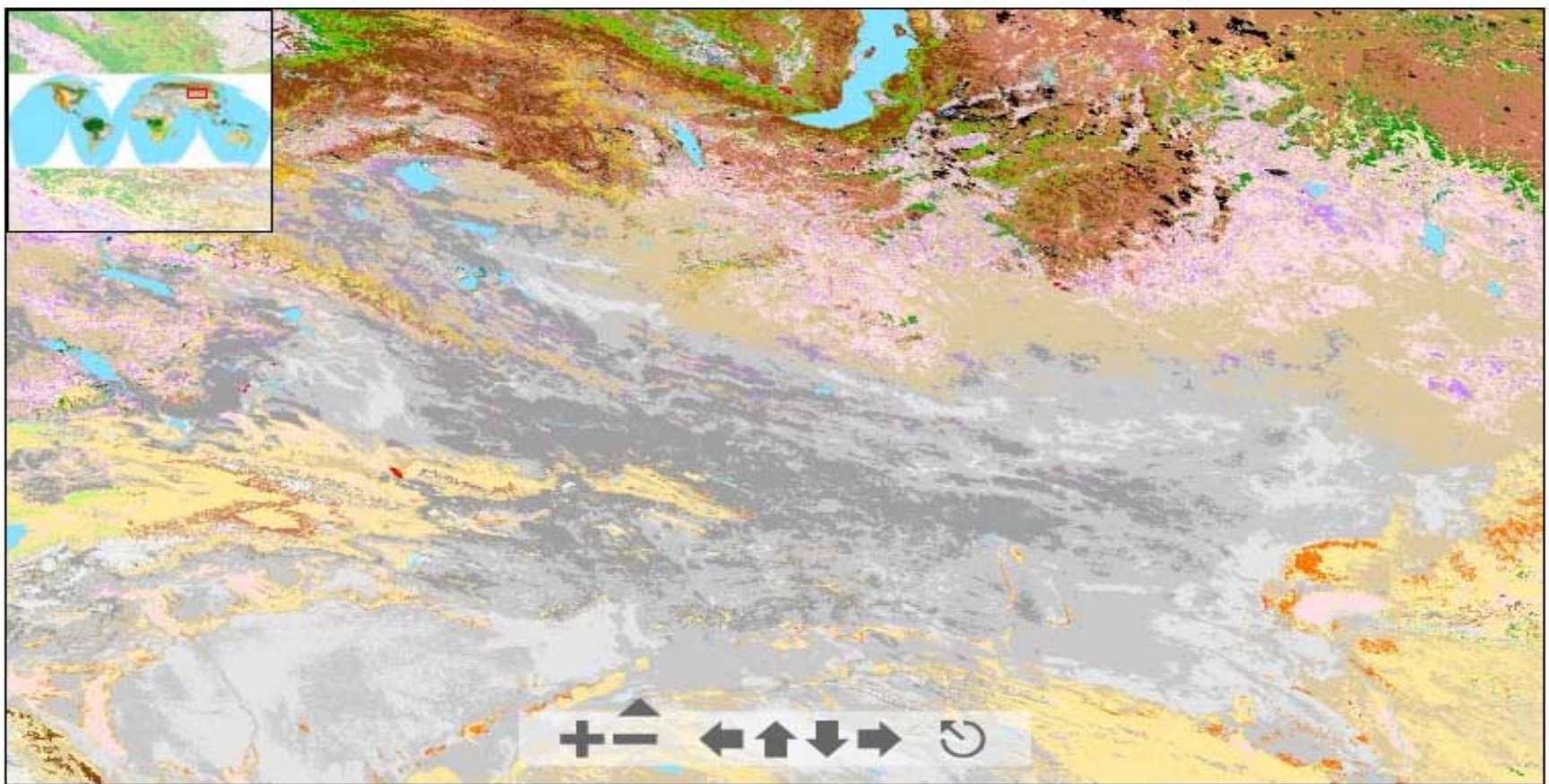
- 6. HONG KONG
- 7. MACAU
- 8. PARACEL ISLANDS
- 9. SPRATLY ISLANDS

**Land resources** consists of various information on different sub topics on land resources of Mongolia: physiography, soils, wetlands, natural hazards, land cover, land use, land use change, land productivity and environmental impact of land uses.

Land is classified in 2003 into six categories as stated below:

- Agricultural land –73.9%
- Urban land – 0.3%
- Roads and Communication land – 0.2%
- Forest land –9.3%
- Water land –0.6%
- Land reserve –15.6%





Forest	Agriculture	Wetlands
Tree Cover, broadleaved evergreen	Cultivated and managed areas	Tree Cover, regularly flooded, fresh and brackish water
Tree Cover, broadleaved deciduous, closed	Mosaic: Cropland / Tree cover / Other natural vegetation	Tree cover, regularly flooded, saline water
Tree Cover, broadleaved deciduous, open	Mosaic: Cropland / Shrub or Grass Cover	Regularly flooded Shrub and/or Herbaceous cover
Tree Cover, needle-leaved evergreen	<b>Deserts</b>	<b>Grasslands and Shrublands</b>
Tree Cover, needle-leaved deciduous	Bare, sandy	Shrub Cover, closed-open, evergreen
Tree Cover, mixed leaf type	Bare, gravel	Shrub Cover, closed-open, deciduous
Mosaic: Tree cover / Other natural vegetation	Bare, rocky	Herbaceous Cover, closed-open
Tree Cover, burnt	<b>Other</b>	Sparse Herbaceous or sparse Shrub cover
<b>Snow and Ice</b>	Water bodies	<b>Urban</b>
Snow and Ice	No data	Artificial surfaces

**Water resources** tells about hydrography and irrigation.

It is estimated that the total water resources in Mongolia amount  $599\text{km}^3$ : 83.7% in lakes, 10.5% in glaciers and 5.8% in rivers.

The total water use is  $0.5\text{km}^3$ . Water resources are unequally distributed over the country. The rivers in Mongolia originated from the three large mountain ranges: Mongol Altai, Khangai-Khuvsgul and Khentein.

The rivers are divided into three main basins depending on their drainage system: the Arctic Ocean Basin, /AOB/ the Pacific Ocean Basin /POB/ and Internal Drainage Basin /IDB/ of Central Asia.

## Water resources

The open surface water such as rivers lakes and springs are used mostly for domestic and agricultural purposes in rural areas. The agricultural water is used for two goals: watering the domestic animals and irrigation agricultural field.





**Plant nutrition resources.** This section introduces the key elements of the nutrition in the arable land and pastoral grass. The scientific research is required on the plant nutrition in the future.



**Hot spots** refers to the problems and constraints facing to water and land resources particularly to sustainable agriculture of Mongolia.

Here is says that one of the “**hottest**” spot is soil erosion that have impact on food supply, additionally no introduction of new improved technology into farming and animal husbandry sectors.

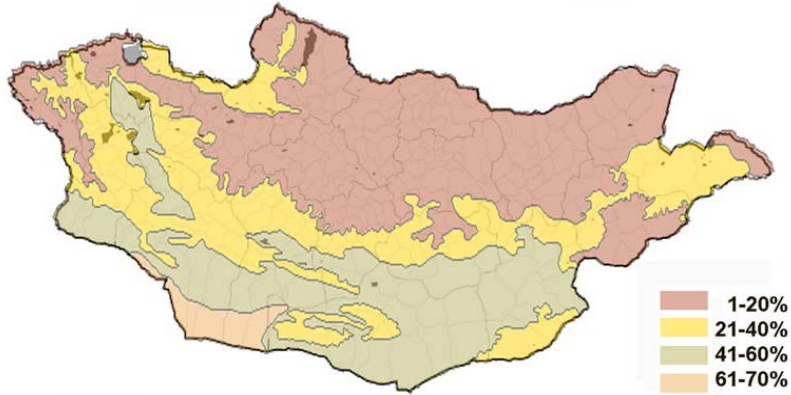
For Mongolia the problems are land degradation and desertification due to the country climate circumstances and human induced factor.

Additionally, Mongolia face other problems such as air pollution, lack of fresh water and deforestation.

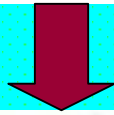


# Hot spots

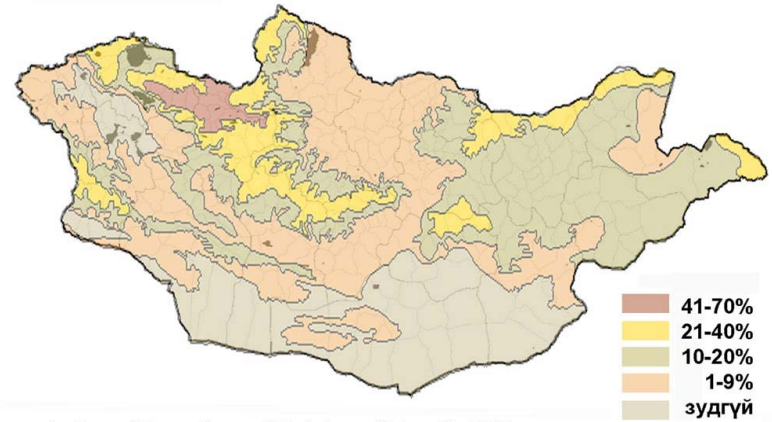
Drought frequency of Mongolia



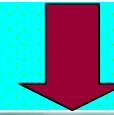
Source: Institute of Meteorology and Hydrology of Mongolia, 2000



Tsagaan Dzud frequency of Mongolia



Source: Institute of Meteorology and Hydrology of Mongolia, 2000



**Bright spots** are about good examples of the programs and projects being implemented for soil conservation and sustainable land use. In other words,

Protection of land resources from degradation or depletion has always been an issue for consideration by the Mongolian Government.

This section includes the sound policy and law on land use and land privatization in Mongolia.

## **Challenges and viewpoints**

The agricultural production plays an important role in food security of Mongolia. Many challenges and views of the researchers are reflected for agricultural development, increased agricultural production and agricultural intensity.

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MONGOLIAN GATEWAY  
DATABASE  
again**

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## Mongolia

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[Country Overview](#)  
[Land resources](#)



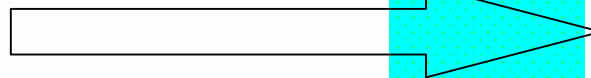
[Water resources \(AQUASTAT\)](#)



[Plant nutrient resources](#)



[Hot spots](#)



[Bright spots](#)

[Challenges and viewpoints](#)



[References / Related internet links](#)

## 2. Land resources

- 2.1 [Physiography](#)
- 2.2 [Soils](#)
- 2.3 [Agroecological systems](#)
- 2.4 [Wetlands, mangroves and inland valley bottoms](#)
- 2.5 [Inundation Land Types](#)
- 2.6 [Natural hazards](#)
- 2.7 [Land cover](#)
- 2.8 [Land use](#)
- 2.9 [Land use change](#)
- 2.10 [Land Productivity](#)
- 2.11 [Environmental Impact of land uses](#)

## 5. Hot spots

- 5.0 [Overview: constraints to sustainable agriculture](#)
- 5.1 [Land-related constraints](#)
- 5.2 [Water-related constraints](#)
- 5.3 [Plant nutrition-related constraints](#)
- 5.4 [other constraints](#)

***Thank you for your attention !***