

The background of the slide is a soft-focus landscape of rolling mountains in shades of light blue and white. Several birds are silhouetted against the sky, and a bright sun is visible on the right side. The text is overlaid on this background.

# **The National "One Map" of Land and Resources and its Application**

**Wenjue Jia**

**Information Center of Ministry of  
Land and Resources**

# Overview

## I Background

## II Main data of “One Map”

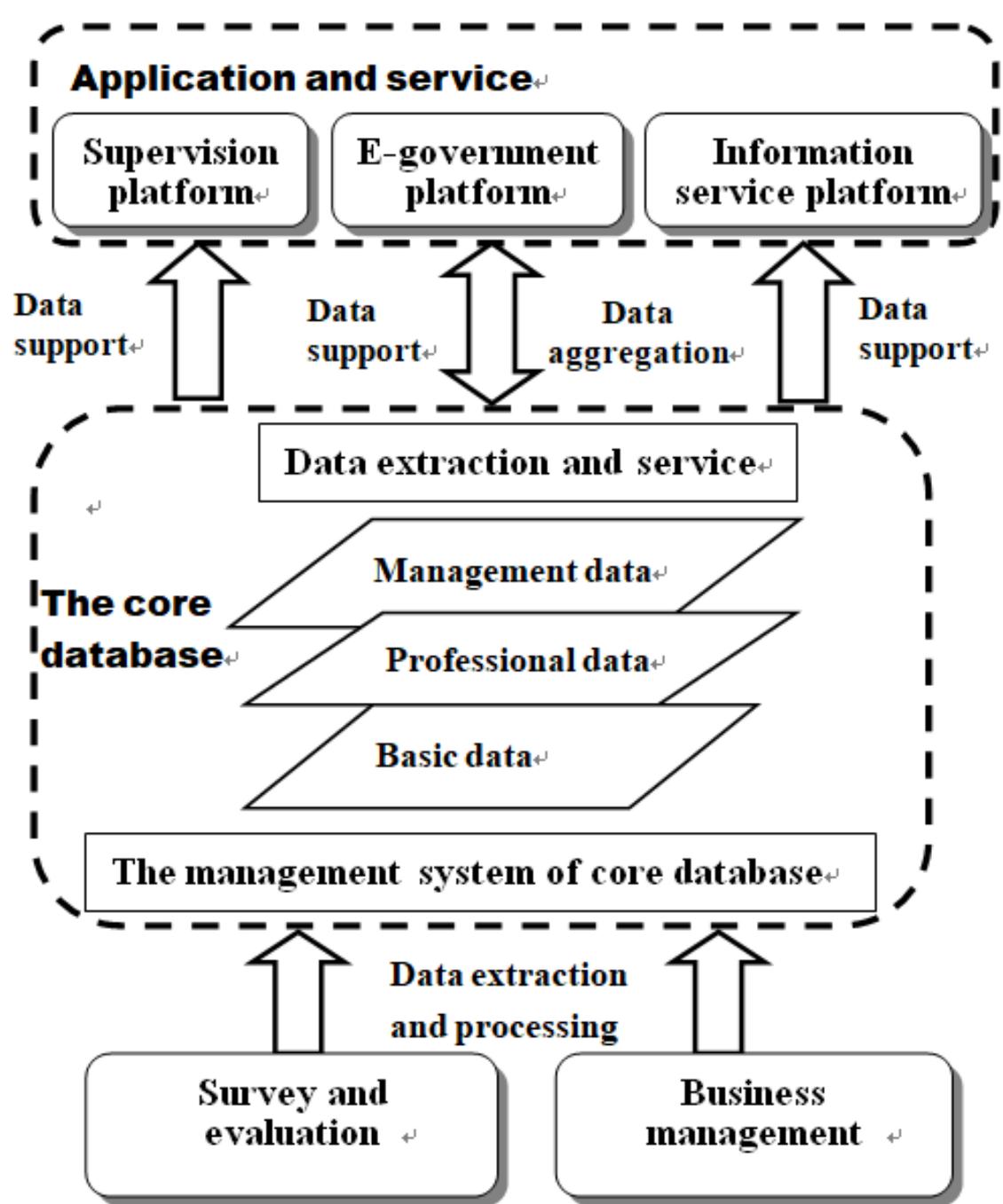
## III Application in Land and Resources Management



# I Background

- **Land and mineral are the important resources , which are the foundation for achieving sustainable development.**
- **Since establishment in 1998, former Ministry of Land and Resources(MLR) has implemented a series of major informatization projects and collected massive data , including land, mining, geology and geological environment data.**
- **In April 2018, as the reform of government administration, the Ministry of Nature and resource (MNR) was established, more kind of data are covered, such as water, forest, grassland, mountain, barren land.....**

**Data updating mechanism and technical standards**



**Infrastructure of Data Center of Land and Resources**

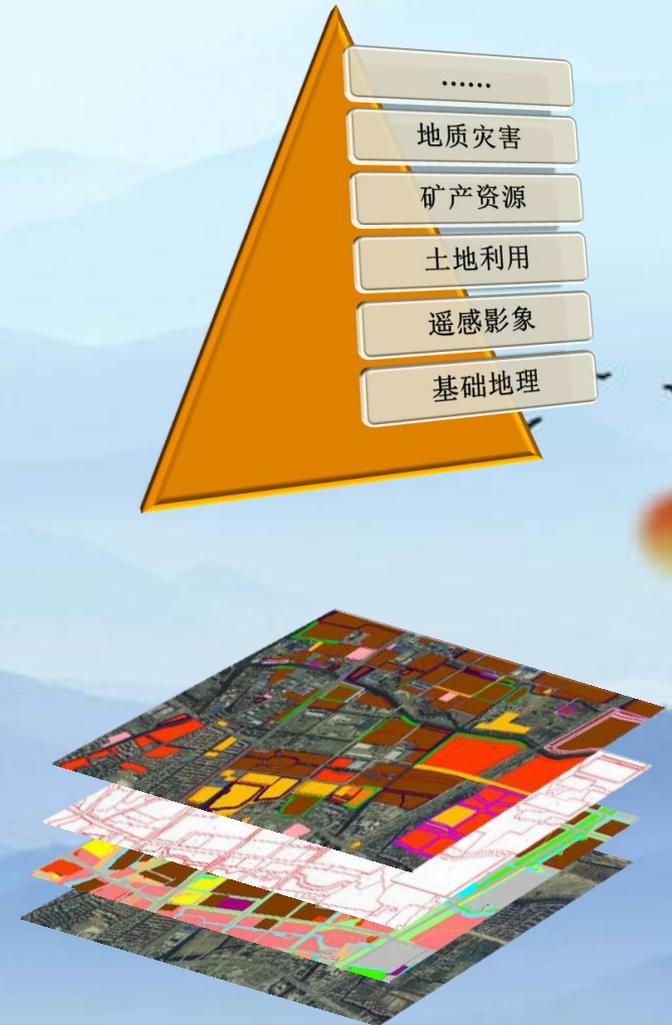
# “One Map“- “electronic sand table“of national land and resources

**Unified base map:** unified basic geography and remote sensing images

**Nationwide coverage:** 9.6 millions square kilometers

**Integrated data:** all the data layers can overlay and work together

**“Electronic sand table“:** reflects the quantity, quality, distribution and potential of resources



# **“One Map” database**

**includes 5 categories :**

**◆ Geography data**

**◆ Land data**

**◆ Mineral resources data**

**◆ Geology and geological environment data**

**◆ Real estate registration data**

**23 subcategories, 6992 spatial layers, constitutes the national  
“One Map” of land and resources**

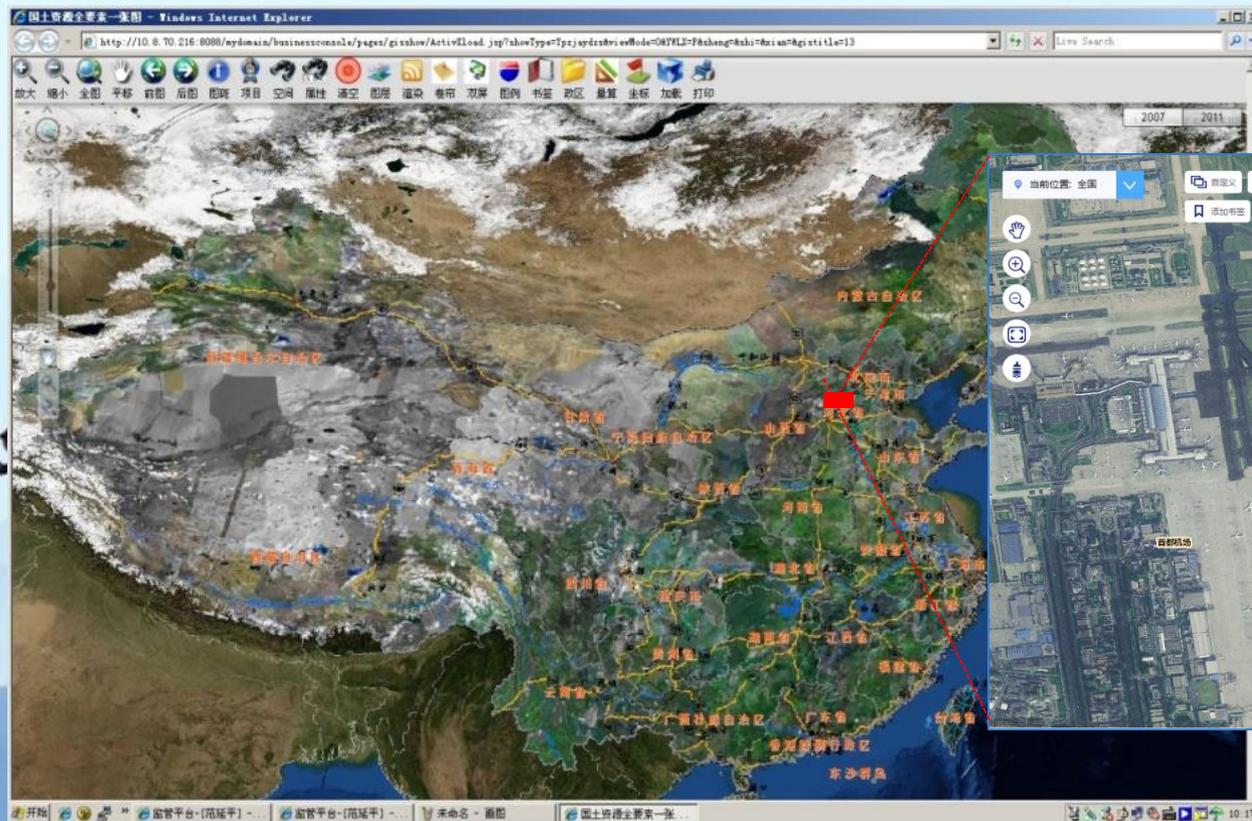
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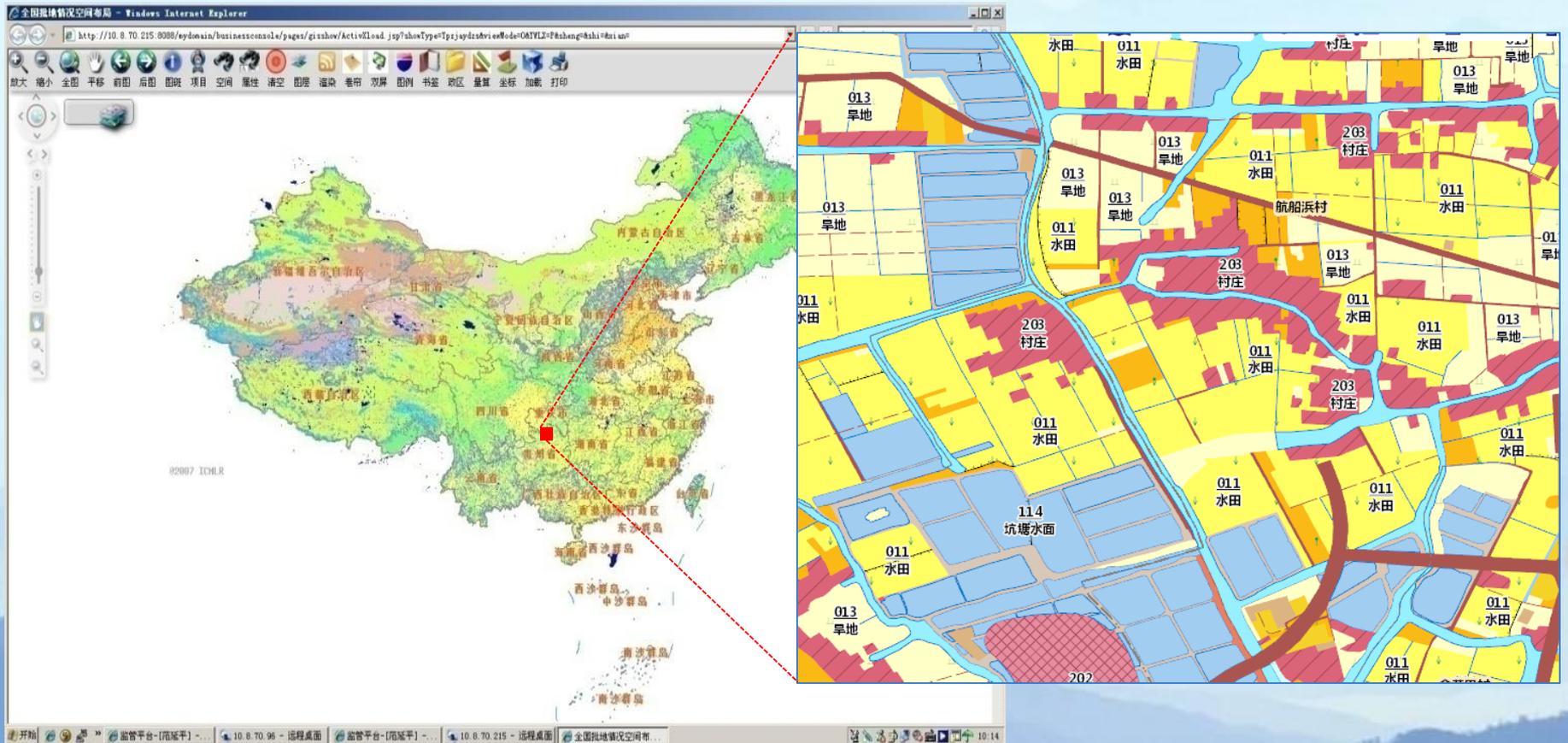
## III Application in Nature Resources Management

# Remote sensing images



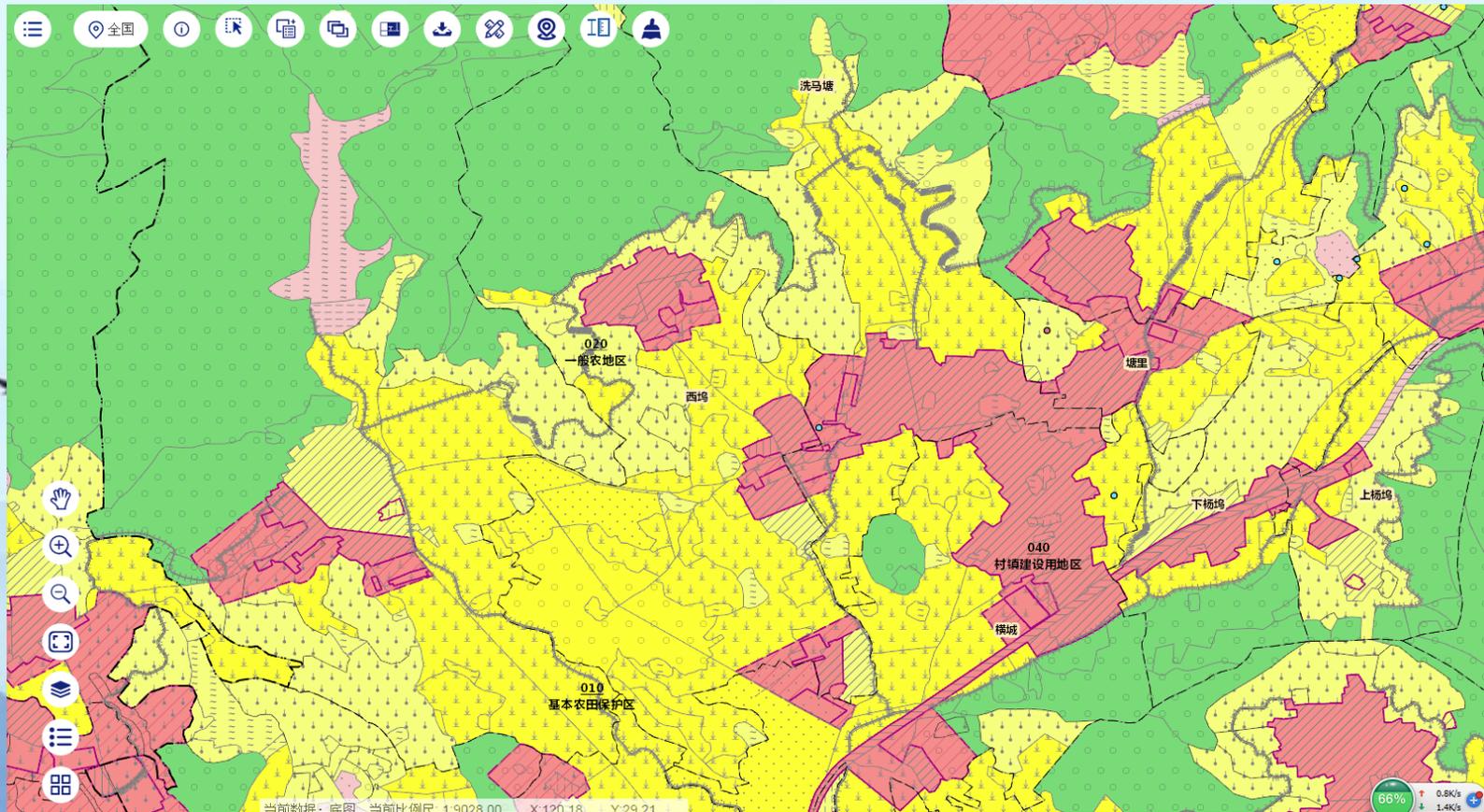
- ◆ National coverage
- ◆ From 2007 to the present, update yearly
- ◆ Main Resolution 2 m
- ◆ Eastern: <1m Western: 5-10m

# Land use



- ◆ land use status data from 2009 to the present
- ◆ Scale: 1:10000 (one to ten thousand)
- ◆ National coverage, update yearly

# Land use plan



◆ five levels with different scales:

◆ National level 1:4000000

◆ Provincial level 1:500000

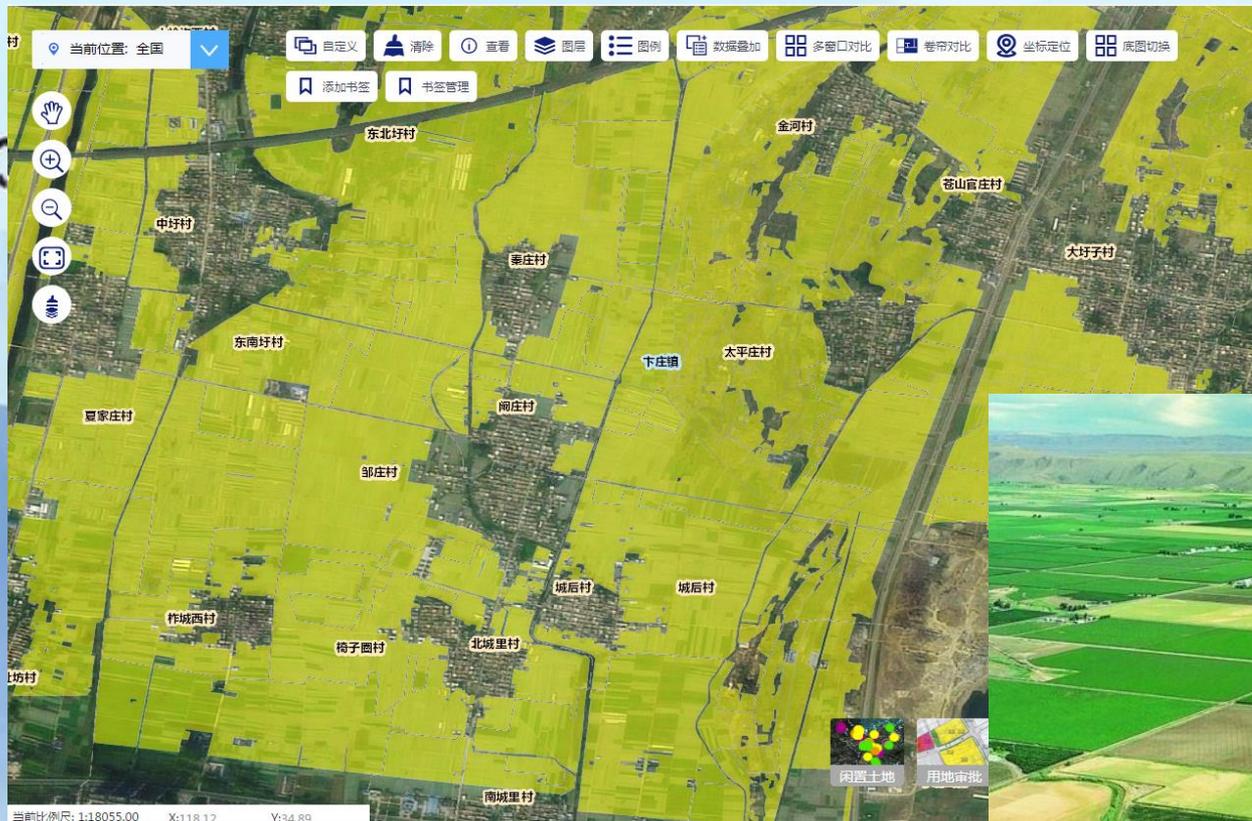
◆ Municipal level 1:250000

◆ County level 1:50000

◆ Township level 1:10000

# Permanent basic farmland data

Including **every pieces of** permanent basic farmland in our country, such as the location, area, type of land, quality, responsibility for protection and protection signs. There are **45.41 million** polygons in the database.





# Mineral resource plan

Including national Mineral exploration and evaluation plan , Mineral exploitation and utilization plan, and of Mineral environmental protection and control plan.



# Mining rights data

Including **exploration right data** and **mining right data**.

The quantity, distribution and attribute of national exploration rights and mining rights are very clear in map.



exploration right data



mining right data

# Geological disaster data

Including data of major geological hazards such as collapse, landslide, mud-rock flow and subside, totaling more than 70,000.





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# Four levels "one map" system

- All 31 provinces have built province level "one map"
  - Most of municipalities have built municipal level "one map"
  - Some county have built county level "one map"
- All four levels "one map" provide strong data support for resource supervision, business approval and information services.



# One map strongly support the whole process management of administrative approval

accept apply  
接受受理



result open  
结果公开



processing online  
网上办理



Joint trial  
集体会审



The time limit for administrative examination and approval has been shortened by more than 50%.

# Eg1 . Assisting approval of construction land

http://10.8.71.43:7071/xydomain/clarpGISPortal/map.jsp?envtype=6020&actdefid=all&recid=1000004 - Microsoft Internet Explorer

**国土资源部业务办公系统**  
The Quality of Land and Resources P. R. C.

当前坐标为 ( X:123.1236, Y:41.4612 )

搜索

专题地图 双窗口

地图设置 数据设计 地图输出

图层控制 空间分析 地图查询

图层显示控制

图层	可见	标注
图层控制	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
城市用地图	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
辽宁省沈阳市分	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
城市用地 (4)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
城市用地 (6)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
城市用地 (8)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
地名注记	<input type="checkbox"/>	<input checked="" type="checkbox"/>
水系注记	<input type="checkbox"/>	<input checked="" type="checkbox"/>
河流	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
公路	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
铁路	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
高速公路	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
网状水系	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
规划调整	<input type="checkbox"/>	<input checked="" type="checkbox"/>
城乡建设用地	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
地形图底	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
用途分区	<input type="checkbox"/>	<input checked="" type="checkbox"/>
WMS图层	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2008年重点城市	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
全国影像	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

立即提交

# Eg2. Illegal land use spot



**Fig.1 Remote sensing image at T1**



**Fig. 2 Remote sensing image at T2**



**Fig. 3 Extract the polygons of newly-increased construction land**



Fig.4 Data of the general land use planning within this area.

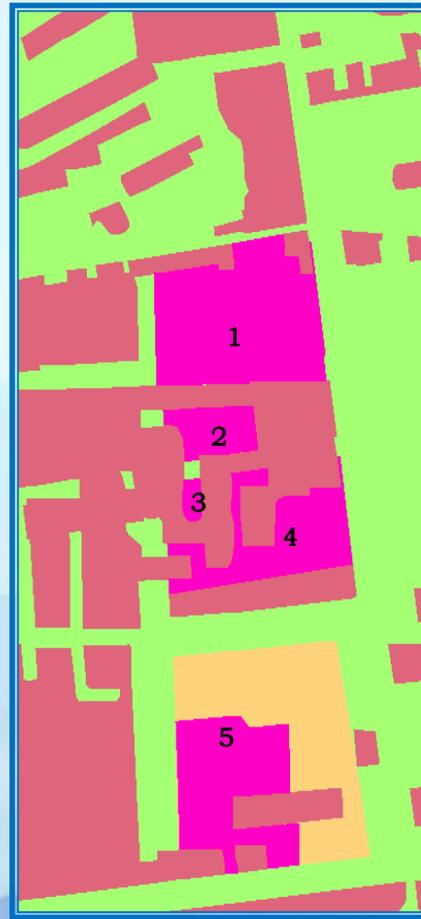


Fig.5 The polygon of newly-increased construction land overlay data of the general land use planning.



Fig. 6 The polygon of newly-increased construction land overlay the spatial information of the approved construction land.

**Polygon No. 1, polygon No.2 & No.5 are not within the constructive expansion permitted zone**

**Polygon No.1 & polygon No.5 are not within the approved construction land.**

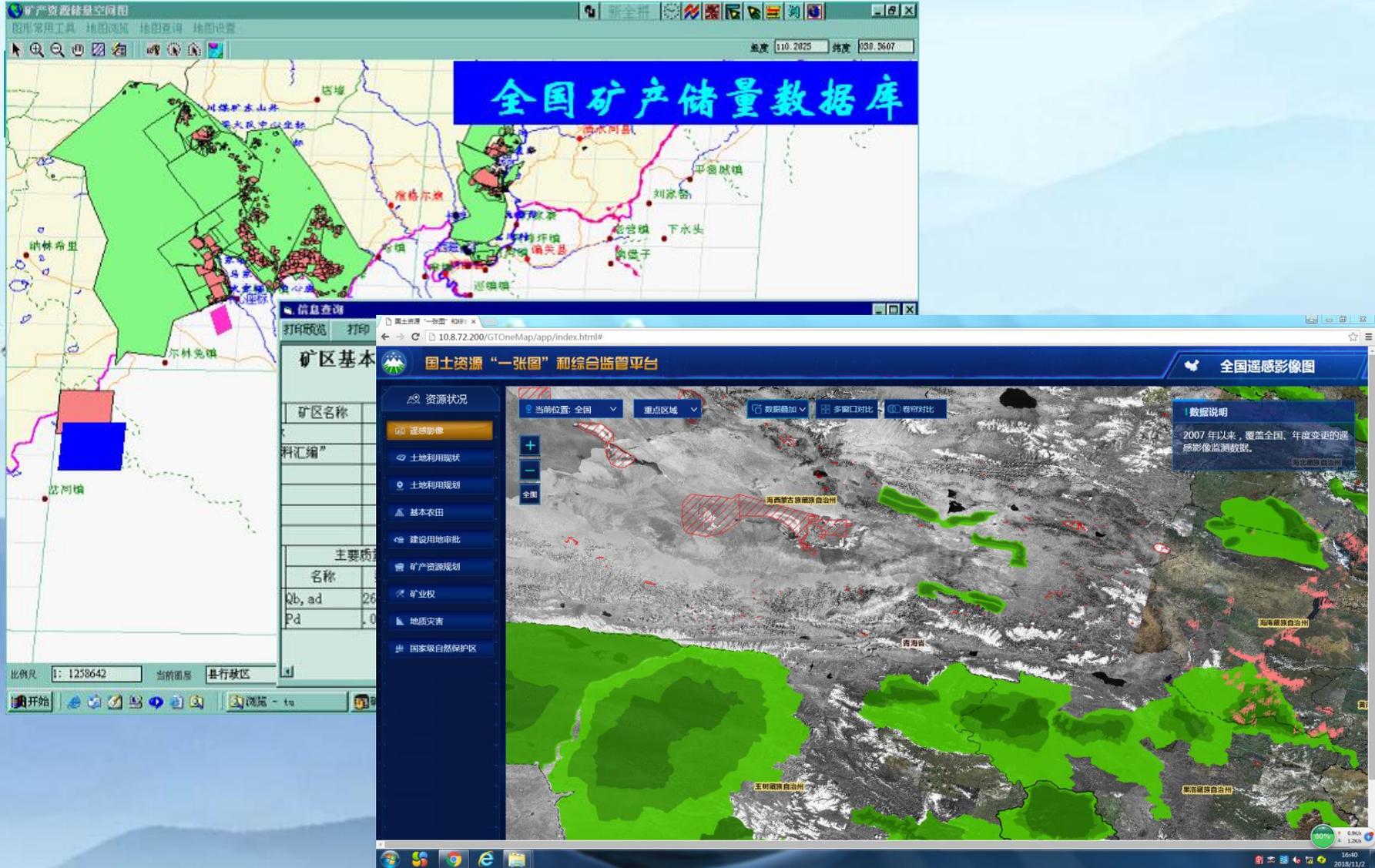


**Fig.7 Polygons of Suspected illegal land**

**Polygon No.1 & Polygon No.5 are not within the approved construction land.**

基本情况	● <b>Project land use information</b>				
用地情况	● <b>Illegal information</b>				
违法情况	● <b>Information of investigation and punishment</b>				
查处及落实情况	● <b>Information of investigation and punishment</b>				
行政处罚内容	自觉(督促)履行落实情况	申请强制执行内容	强制执行落实情况	落实到位率	
罚款金额(元)	17098.39	17098.39		100.00%	
没收违法所得金额(元)				0.00%	
没收违法建筑面积(平方米)	5573.40	5573.40		100.00%	
拆除违法建筑面积(平方米)				0.00%	
其他					
	建议处分	处分落实情况	移送司法机关	追究刑事责任落实情况	
省部级(人)					
地厅级(人)					
县处级(人)					
科级及以下(人)	1	1			
其他(人)					
*结案情况	<input checked="" type="radio"/> 已结案 <input type="radio"/> 未结案				
备注					

# Eg 3. Assisting approval of mining rights



# Eg 4. Analysis of resources situation

**Cultivated land change  
and requisition-  
compensation balance**

**Real estate  
land use**

**Mineral reserve  
change**



At the first “Digital China” Construction Summit in 2018, “one map” were rated as one of the 30 “Digital China” construction annual best practices, and included as one of 13 “Digital China” construction annual best promotions.





**Thanks**

A misty mountain landscape with layers of blue-toned mountains receding into the distance. Several birds are flying in the sky, and a bright sun is visible on the right side. The word "Questions?" is written in a large, bold, red serif font in the center of the image.

**Questions?**