The application of the satellite remote sensing data in the land investigation along the freeway

(LIU Xianbin, LI Xiumei, ZHAO Xinggui)

(Tianjin University of Science and Technology，
Tianjin TEDA， CHINA, 300457）
TEL. 022-60600328, 13352068008
Email: lxb0688@tust.edu.cn

1 The traditional methods disadvantage :

2 The advantages of the satellite sensing data in land survey;

3 Interpreting the land use along the freeway with the satellite data;

4 Conclusion

1 The traditional methods disadvantage :

- **A large number of people;**
- **A lot of material;**
- **Financing**
- **the surveying precision is lower;**
- **Take a long time;**

2 The advantages of the satellite sensing data in land survey

- Provide the geographical landscape information of the earth’s surface in time;
- Reduction macroscopic object;
- Rich information;
- Show the picture at different time.

3 Interpreting the land use along the freeway with the satellite data

(1)TM satellite image

(2) No.5 land satellite on April 13, 2005;

(3) 116° 59 ′ 16.90″ E -117° 56 ′ 59.40″ E

39° 12 ′ 54.54″ N - 39° 21 ′ 10.77″ N

(4) TM 2、TM 3 and TM 4

(5) ERDAS IMAGINE8.5

The classification has adopted the following :

- **Initial classification;**
- **Identify the special subject;**
- **Classification and merger;**
- **Coloring;**
- **Classification aftertreatment;**
- **Statistics analysis**

<汉沽到武清国道沿线土地利用遥感图像>

图例

Red: Layer_4

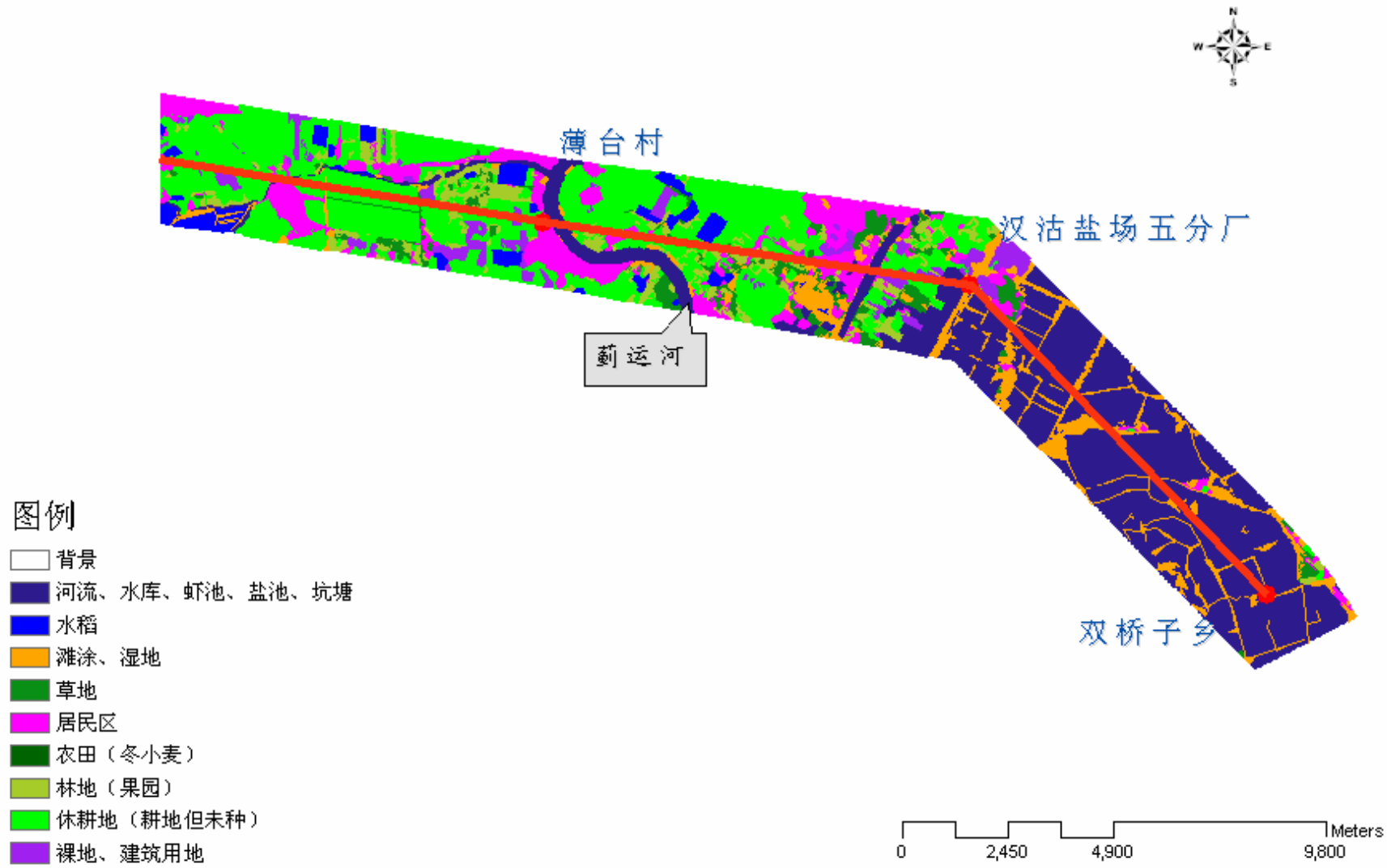
Green: Layer_3

Blue: Layer_2

0 4,750 9,500 19,000 Meters

The image of the satellite remote sensing shows the land use along the freeway

汉沽到武清国道沿线土地利用遥感解译图



The image of the satellite remote sensing shows the land use.

Table 1 The distribution of the land utilized along the freeway

Code	Sort	Area（m^2）
1	River\pound\shrimp pool\billabong	35609100
2	rice field	19412400
3	shoal\marsh	3927660
4	lawn	19055100
5	residential district	20077800
6	farmland	15932400
7	woodland	12520900
8	fallow	145766000
9	bare land and building land	20700600
sum		293001960

4 Conclusion

(1)There is obvious advantage to survey the land use by means of satellite remote sensing technique.

(2) Because of the restriction of the image resolution, it is very hard to interpret the small object and vegetation.

(3) The satellite remote sensing technique should be cooperated with other methods, we can understand the land use completely.

(4) The satellite remote sensing technique would become an important means in land use survey.

Thank you!