EXERCISE 12  AERIAL PHOTO INTERPRETATION

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12.1 INTRODUCTION

In Exercise 11, you have learnt to apply image transformation techniques. You will continue with the image classification and accuracy assessment exercise in Exercises 14 and 15 but it will be important for you to learn about visual interpretation for both aerial photographs (i.e. aerial photo interpretation) and satellite images (image interpretation). The purpose of this and the next exercise is to get you acquainted with the process of information extraction from remotely sensed photographic and digital images.

In this exercise, you will get familiarised with aerial photographs, elements of photo interpretation and the process of information extraction from aerial photographs.

Objectives

After working through this exercise, you should be able to:

- describe characteristics of aerial photographs;
- list basic elements of aerial photo interpretation; and
- identify and interpret features present in the given aerial photograph.

12.2 REQUIREMENTS

To carry out this exercise, you need to have the following:

- grayscale aerial photographs
- colour aerial photographs, and
- a stereoscope.

Before starting this exercise, you are advised to have your pen/pencil and notebook with you as you will be using them to write down your observations and results obtained while performing this exercise.

12.3 STEPS

Perform the following steps for interpreting aerial photographs:

1. Visualise a grayscale aerial photograph provided by the instructor.
2. Determine the scale of the photograph and calculate the representative fraction.
3. Identify the vegetation, water body and habitation areas present in the photograph.
4. Prepare photo interpretation keys for the above mentioned features in the format given below, on a separate sheet of paper:
Remote Sensing Data Handling

Refer to Unit 7 of MGY-002 in which you have studied about aerial photo interpretation.

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5. With the help of stereoscope, visualise the stereopair aerial photographs.

6. Note the importance of features identification using stereoscope.

7. Write in your notebook about the significance of photo interpretation keys.

8. Now, visualise the colour of the aerial photograph and identify the similar features present in the photograph.

9. Prepare photo interpretation keys for the above mentioned features in a separate sheet as you have done for grayscale photograph.

10. List out the differences in grayscale and colour aerial photograph in your notebook.

After completing the exercise submit the following to your instructor for evaluation:

1. Interpretation keys used for grayscale and colour aerial photographs.

2. A sheet listing out differences in the grayscale and colour aerial photographs and their interpretation.

12.4 HOME WORK: DO IT YOURSELF

1. What is the difference in interpretation of vegetation features present in grayscale and colour aerial photographs?

2. How would you prepare photo interpretation keys for crop area and fallow land.

3. Prepare photo interpretation keys for river and lakes/dams.

4. Try to determine fiducial marks and principal points of the photographs used.

12.5 USEFUL LINKS

- www.fas.org/irp/imint/docs/rst/Sect10/Sect10_1.html.