

BCM3173 – 1617-I

MINI PROJECT

In recent years, forest fire has been regional and national concern since it triggers many other environmental and health problems. In addressing this issue, the government welcomes any approach to monitor the forest fire more effectively, and to define the high risk areas that are prone to fires.

Your company has tasked your department (GIS department) to prepare a presentation for the government officials in order to convince them that GIS is the best solution. You are going to propose the use of remote sensing data and other spatial data in order to develop a useful GIS system.

For this purpose, your team must do the following:

Part 1

- i. Present the fire incidents that happened from **2005** until **2015** (data is obtained from satellite image extraction) in **Kuantan and Pekan**.
- ii. Collect as many fire incident report (from newspaper or any reliable sources) as possible, and use this report to **validate** the fire hotspot from your satellite data.

Part 2

- iii. Perform spatial analysis that will help you define high risk and low risk area. To do this, prepare more (other) data and use them together with 'fire hotspot'. You need to discuss thoroughly with your group members on how to define the risky area.

Following is the list of dataset that you can consider:

- Fire hotspots - vector data, point form (Compulsory, Provided)
- State boundary - vector data, polygon form (Compulsory, Provided)
- District boundary - vector data, polygon form (Compulsory, Provided)
- Land use data – (Optional, Not Provided)
- Road – (Optional, Not Provided)
- Residential areas – (Optional, Not Provided)
- Others – (Depends on what analysis you are preparing).

Instructions:

1. This mini project must involve every group member. Group leader must ensure even distribution of task. The involvement must be apparent.
2. Both lab and lecture time every week from now onwards are reserved for this mini project. Hence, your attendance in the lab is compulsory.
3. The presentation date will be on **13 and 20 Dec 2016***. Report must be submitted immediately after the presentation.
4. The presentation must involve all group members.

*subject to changes

Report guideline:

- i. Cover page – Group name, list of group members, ID)
- ii. Role of each group member
- iii. Data preparation – explain what you did in order to prepare/process the data (what operations, what analysis, which tool, how etc.).
- iv. Result (proper thematic maps and detail explanation on what they actually mean).
- v. Softcopy submission (report, complete geodatabase with feature classes, and map doc *.mxd).