IDENTIFYING SHRINES AREA USING RADARSAT AND GIS TECHNIQUES:
LEMBAH BUJANG, KEDAH, MALAYSIA

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ABSTRACT: Lembah Bujang was an international cultural and commercial crossroad 2000 years
age. Its history, its potential, economic and socio – cultural administrator and significance, its art and
architecture, its diplomatic relationship and so on offer fertile ground for scholar investigation.
However, the issue on the pre-historic ruins as archaeological sites in Lembah Bujang were secretly
demolished by a modern development brings a further analysis. The aim for this research is to identify
a potential shrines area in two study areas consist of Lembah Bujang and Sungai Batu using
RADARSAT and GIS techniques in conserving the historical site. The multi-temporal images of
RADARSAT for years 2003 and 2014 have been used with two techniques in identifying potential
shrines consist of Local Adaptive Filtering and Feature Extraction have been used and tested three
selected study areas with using processing software of ENVI 4.8 and ArcGIS. The finding shows that
The Local Adaptive Filtering on GAMMA Map filter is one of the best techniques in identifying
potential shrines areas at once as guidance to pursuing an area as official gazette historical site in
Malaysia as well contribute in the chronology of the land use development planning in Lembah
Bujang, simultaneously assist in making recommendations in land use planning guidelines for
preservation and conservation in the heritage site.

Keywords: GIS, Remote Sensing, Land Use Planning and historical sites.