Development Of WebGIS For Protected Areas Mapping And Monitoring In The ASEAN Region

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Background

Proposed Methodology

Innovative aspects

Background

➢ Protected areas are currently facing threats such as climate change, habitat loss, poaching and others.

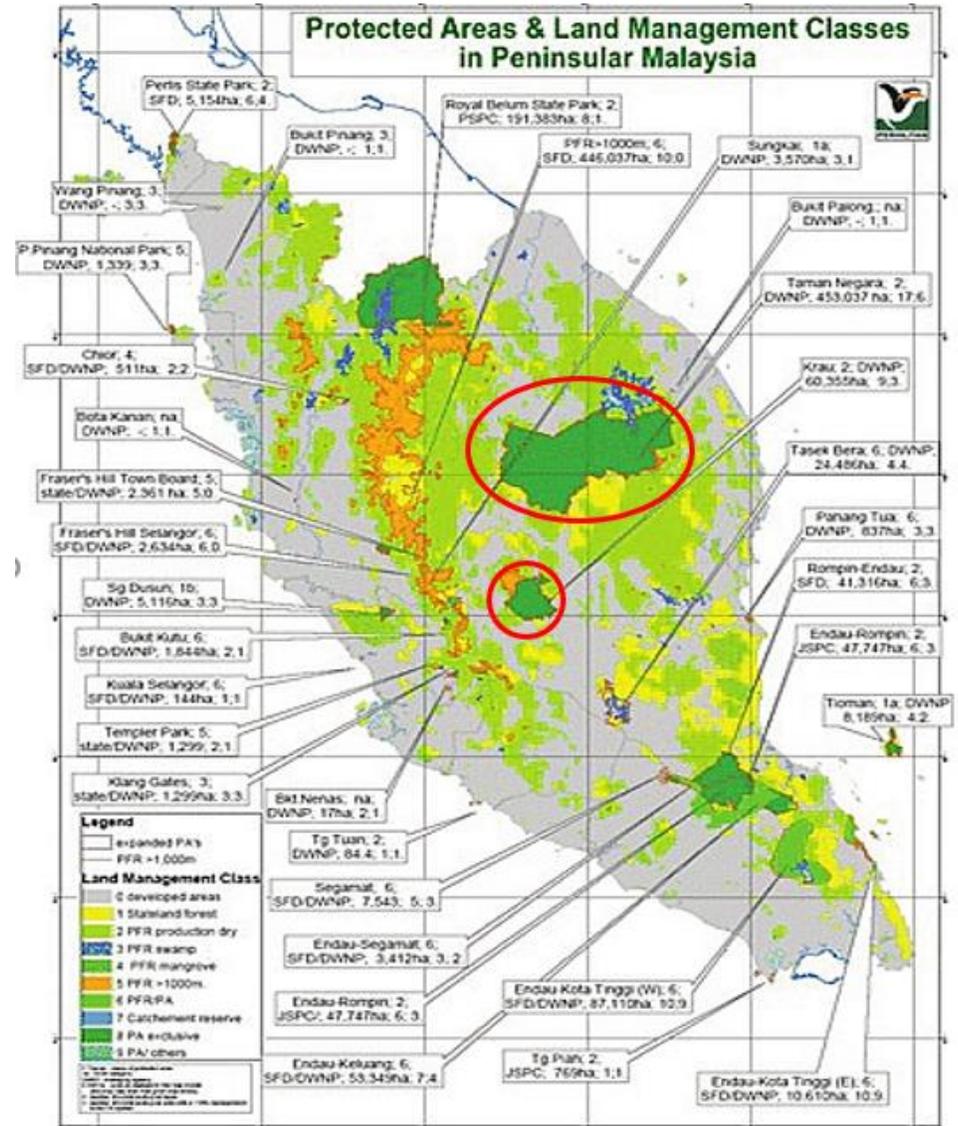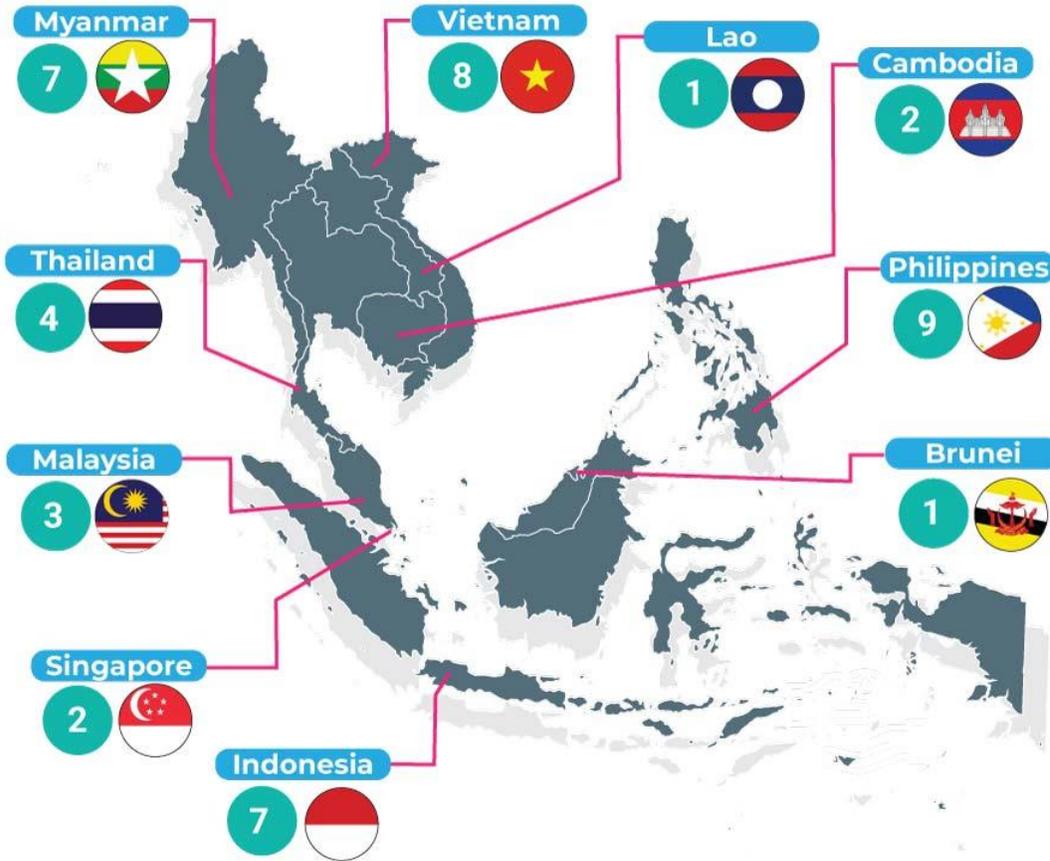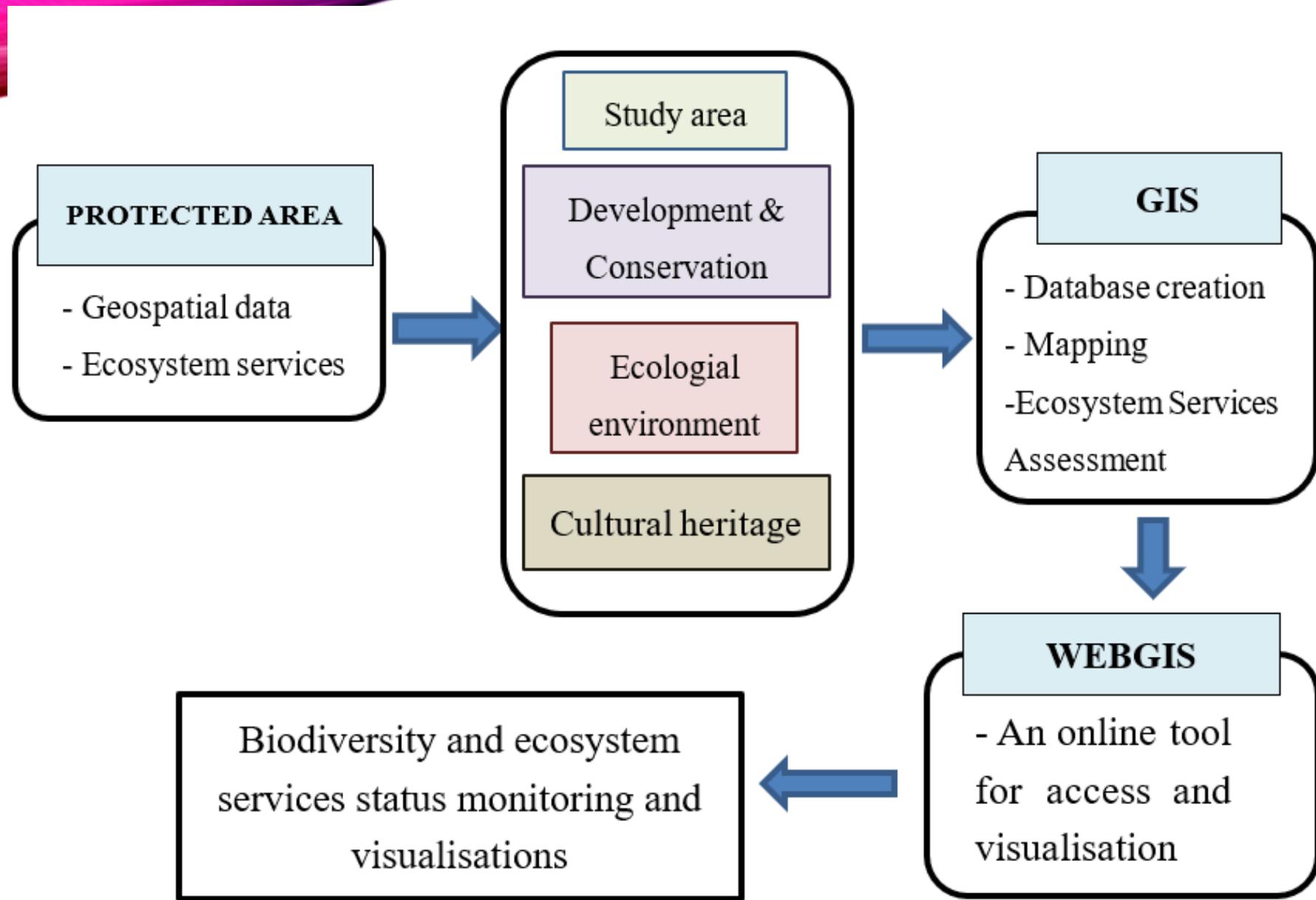➢ Without proper monitoring, it will affect the environment, life support systems and economics.

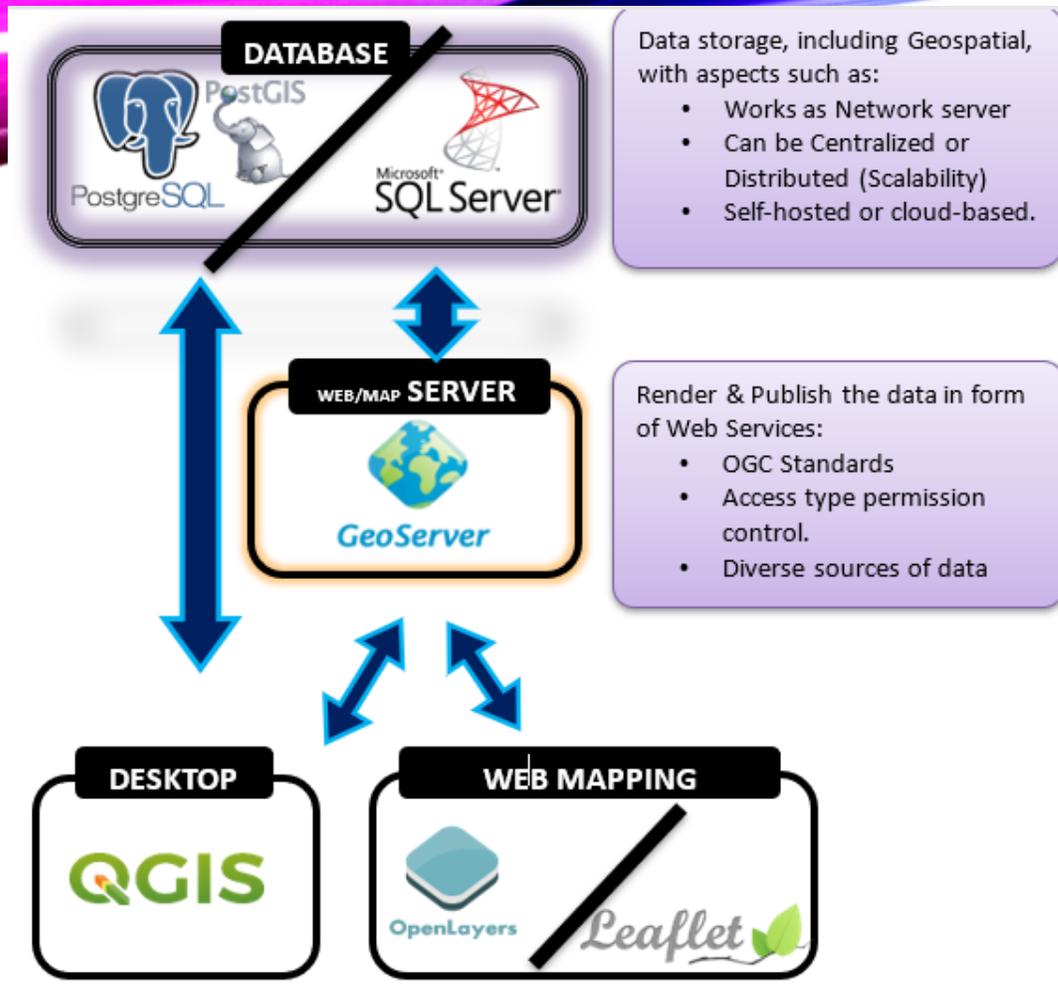➢ Hence, it is important to achieve the objectives as listed in the Sustainable Development Goals (climate action, life on land and others).

- PA in Malaysia status
- Monitoring approaches
- Why the need for the proposed solution.
- Novelty

ASEAN HERITAGE PARKS

Proposed Methodology

Information and Communication Technology

Remote sensing

Geographic Information System (GIS)

Global Navigation Satellite System (GNSS)

DATABASE

PostGIS / PostgreSQL / Microsoft SQL Server

Data storage, including Geospatial, with aspects such as:
- Works as Network server
- Can be Centralized or Distributed (Scalability)
- Self-hosted or cloud-based.

WEB/MAP SERVER

GeoServer

Render & Publish the data in form of Web Services:
- OGC Standards
- Access type permission control.
- Diverse sources of data

DESKTOP

QGIS

WEB MAPPING

OpenLayers / Leaflet

Desktop GIS is thick client that provides the following:
- Data preparation
- Advanced geospatial analysis
- Visual styling

Web browser is a thin client that be found in nearly every operating systems, including smartphone:
- Visualise all geospatial data, vector and raster.
- Performing search & query.
- Interactivity in usage.
- Data entry and submission.

* They are dependent on being online.

Innovative Aspects

❖ The utilisation of advanced technologies (remote sensing, GIS and GNSS) can help to monitor the protected areas effectively.

❖ A WebGIS development is essential to ASEAN Heritage Parks in order to conserve and manage the protected areas.

❖ Implementation of advanced network of sensors to monitor changes and related activities that can threaten the protected areas.

❖ Regional collaborations to exchange ideas and expertise.
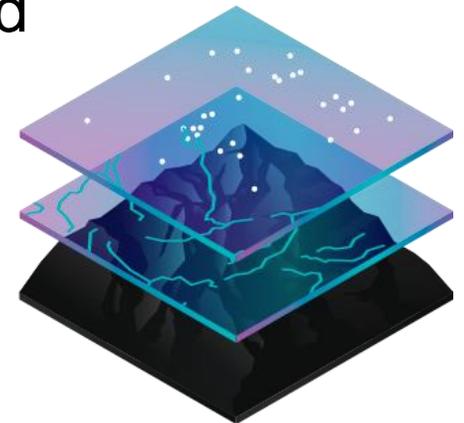
EXPECTED OUTCOME
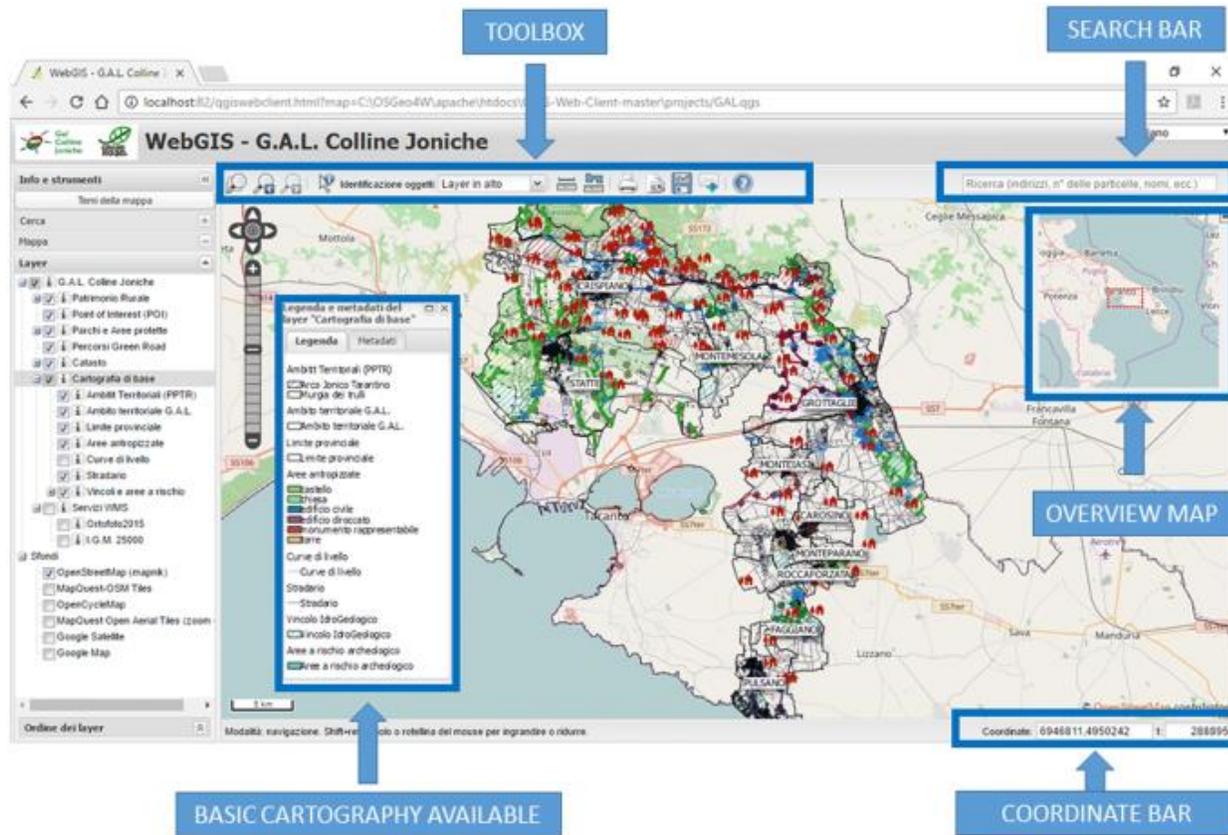
Examples

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