Application of GIS for EIA Screening

Why conduct Screening?

An essential aspect of conducting an EIA is to determine the level of impact of the proposed development or initiative based on its scale, extent, and nature.
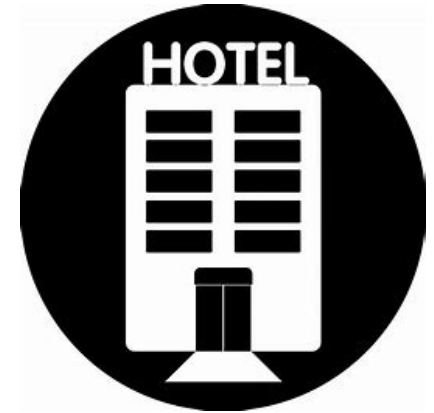
Retail

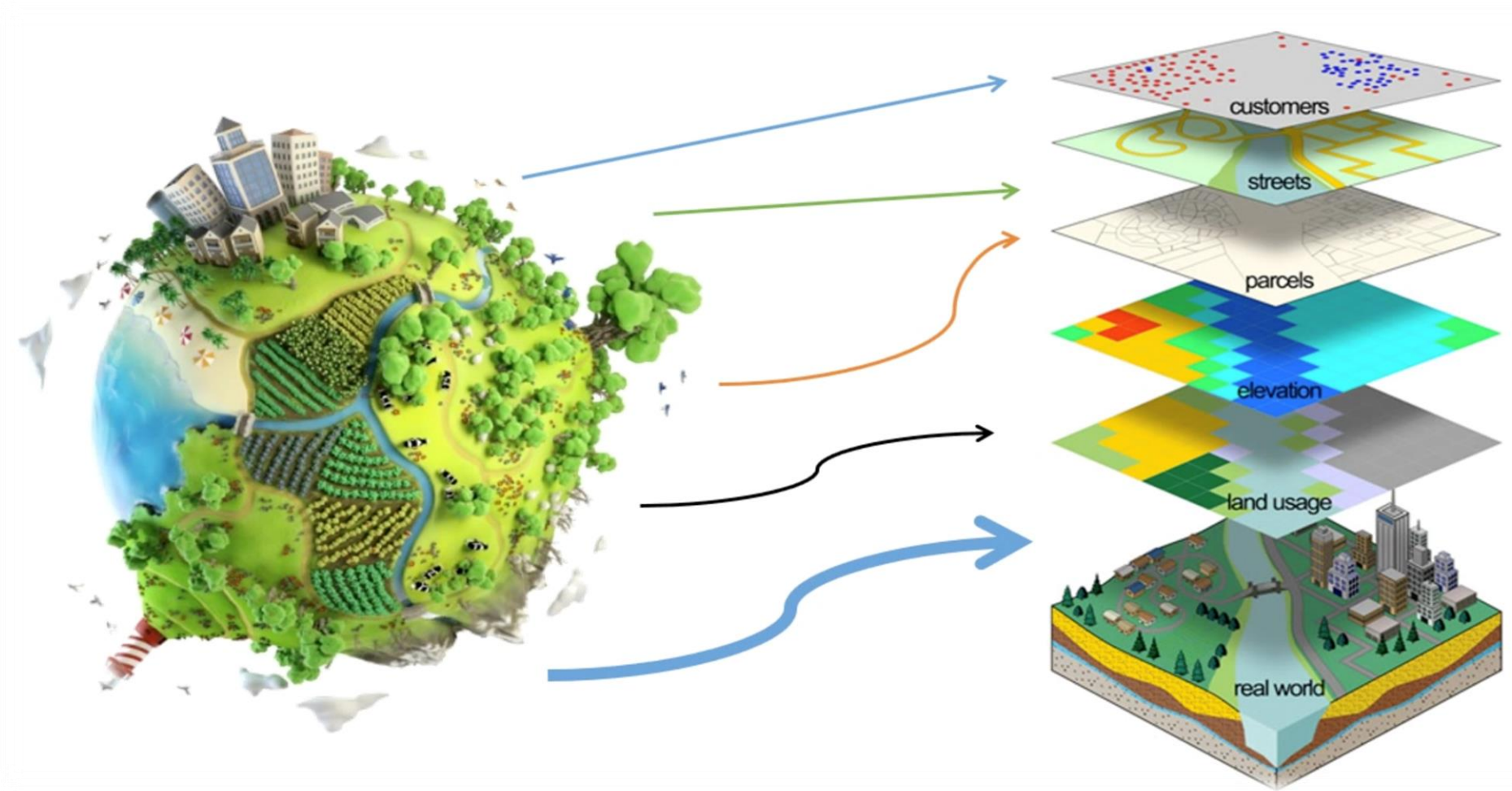**Health**

Extractive Industries

Tourism

Regardless of the type of development, what is common for any of them is the need for data to determine the status of the area of interest.
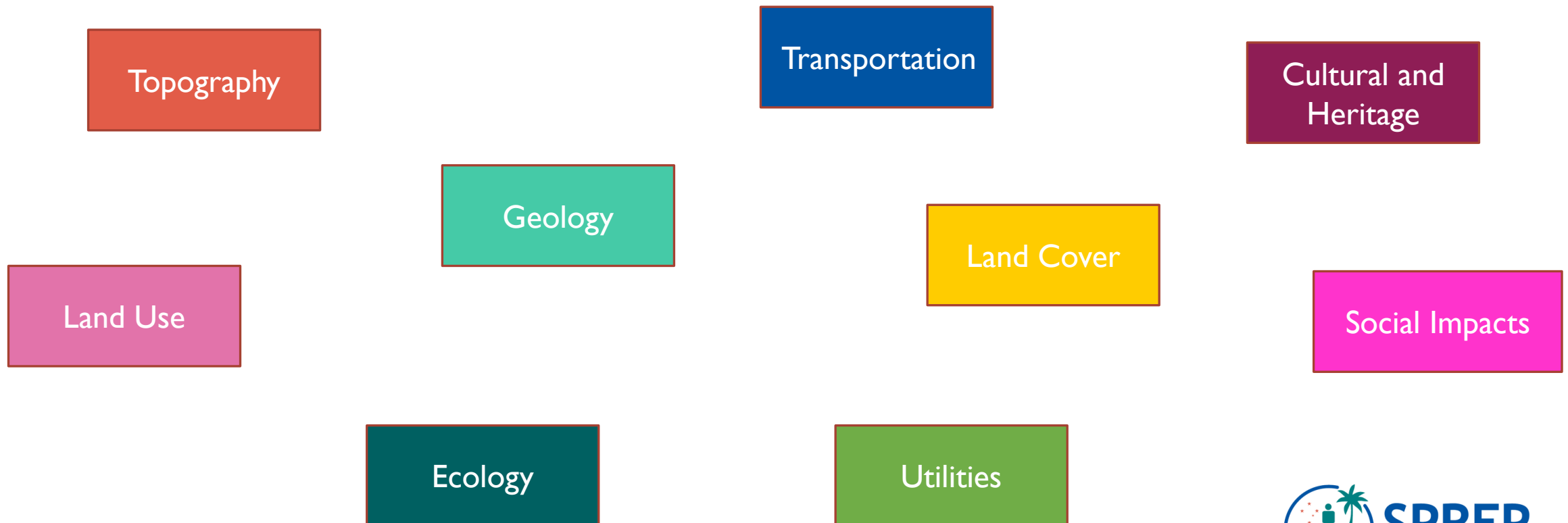

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Representation of Spatial data in the real world

Spatial datasets are used in the EIA Screening process using the GIS tool

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Using GIS in the Screening Process

GIS as a tool allows project proponents and regulating authorities to determine whether an Environment Impact Assessment is necessary using maps derived from spatial data analysis.

Topography

Transportation

Cultural and Heritage

Geology

Land Cover

Land Use

Social Impacts

Ecology

Utilities

GIS data analysis for EIA Screening

Overlaying these datasets and conducting analysis enables us to visualize how the development will impact the surrounding environment based on the baseline information collected.
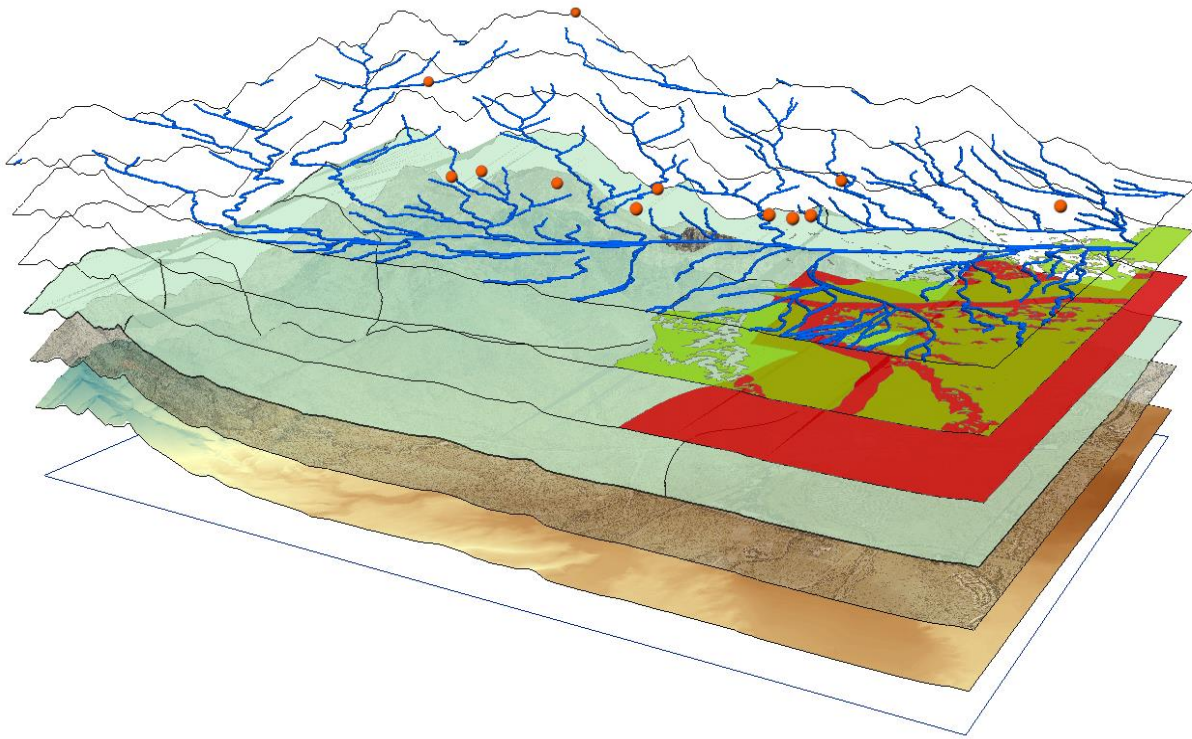
1. **How far is the proposed development from the:**
   - **River**
   - **Road**
   - **Village**
   - **Areas of cultural significance**
   - **Farming areas**

2. **What is the percentage of land cover in the area?**

3. **Is the area susceptible to flooding, landslides, etc?**

4. **Are there any existing roads?**

And others !!

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Scenario: Companies X, Y, and Z want to construct a development in the proposed areas of Guadalcanal.
Question: How can you use GIS to show this in the screening stage of the EIA process?
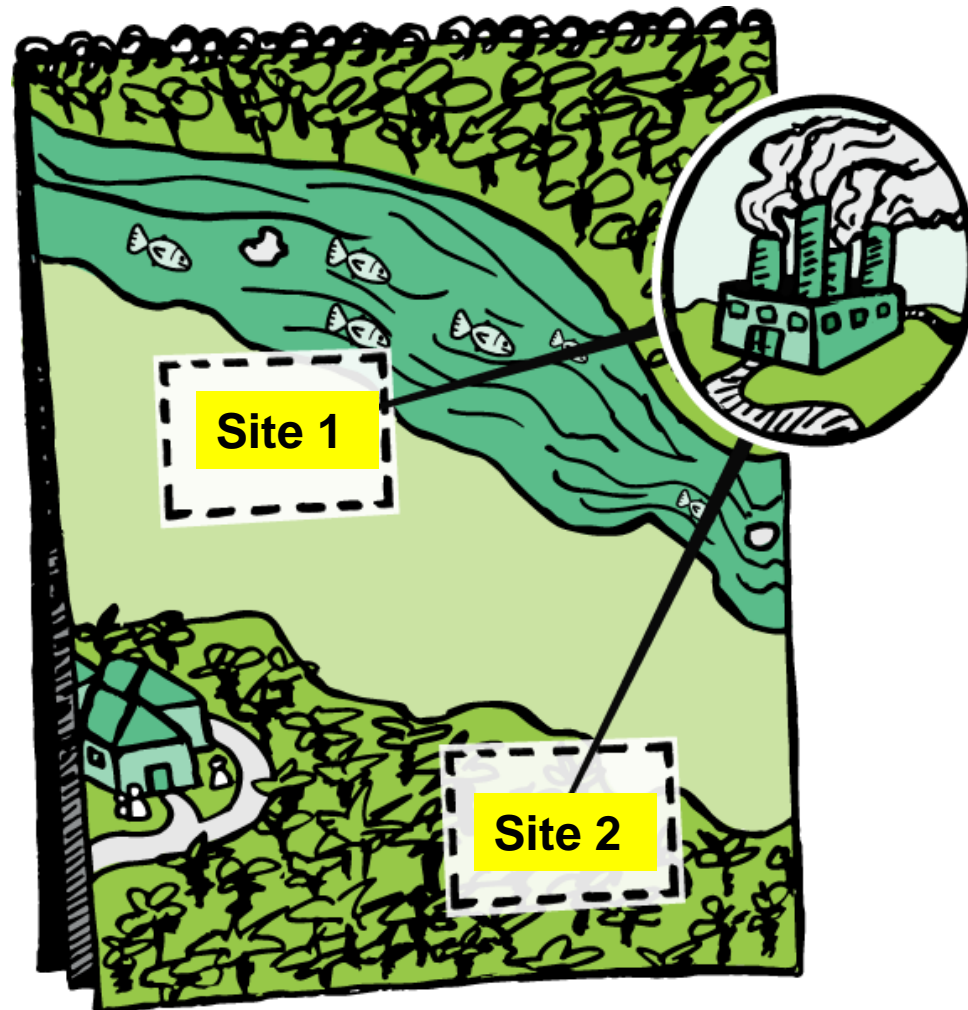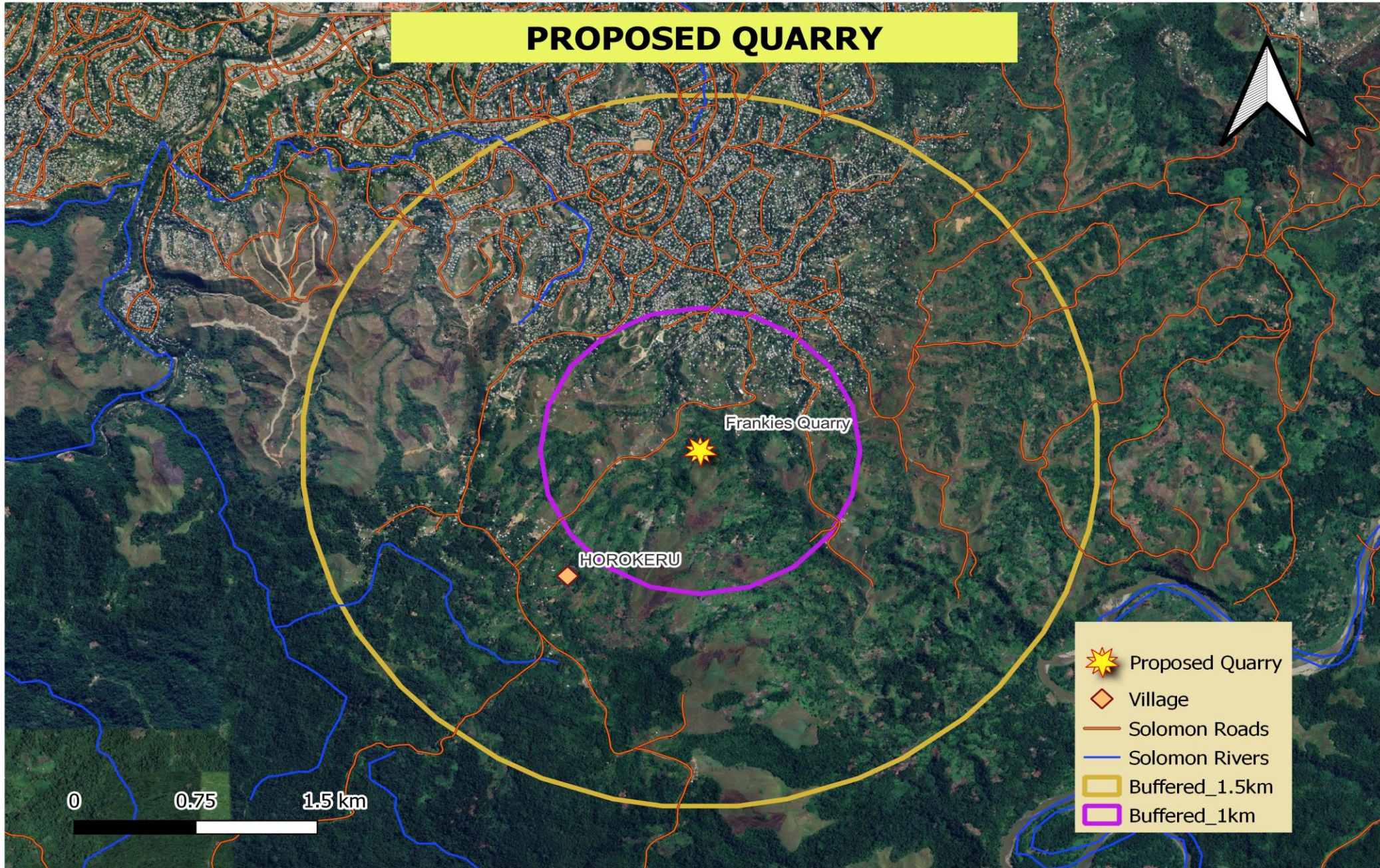

Spatial Data Required

- Residential
- Villages
- Rivers
- Forest
- Agriculture
- Others

GIS tool as a Key contribution of screening to a good EIA

PROPOSED DEVELOPMENT

Quarry

Distillery

0	0.25	0.5 km

— Solomon Roads
— Solomon Rivers
▢ Proposed Development

PROPOSED QUARRY

Frankies Quarry

HOROKERU

0   0.75   1.5 km

Legend:
- ⭐ Proposed Quarry
- ◇ Village
- — Solomon Roads
- — Solomon Rivers
- ▢ Buffered_1.5km
- ▢ Buffered_1km

Thank you for listening !!

Any Questions?