Reliability of land system properties is classified into 5 classes:

1. Plausible (based on exploration survey)
2. Tenable (based on image interpretation)
3. Tenable (based on image interpretation)
4. Tenable (based on image interpretation)
5. Plausible (based on exploration survey)

Land Resource Planning
- Spatio-temporal data
- Natural Resource
- Natural Resource
- Natural Resource
- National Geographic Information System
- Land Resource Data
- Land Resource Map
- State Land Planning

Spatio-temporal data is obtained from related agencies and recorded in a standardized land database for spatial land use planning.

To organize and standardize the land systems for supporting spatial land use planning. The standardization of the land systems includes spatial data, feature codifications, database transformation, and metadata creation. The organized and standardized land systems are expected to be easily accessed and integrated with other thematic data by related agencies for spatial land use planning.

Landscape is divided into land units called land systems. The land system concept is based on ecological principles and presents closely interdependent links between agroclimate regime, rock types, landforms, soils, hydrological conditions and living organisms.

Data was interpreted from the imageries using computerized image interpretation techniques and transferred to the JGOG National Geographic Information System database in Arc/Info format.

To organize and standardize the land systems for supporting spatial land use planning, systems for supporting spatial land use planning are expected to be easily accessed and integrated with other thematic data by related agencies for spatial land use planning.
Spatial data standardization

To standardize data, both land system and RBI layers are transformed into geographic coordinates. The coastline of land system layer is replaced with the coastline of the RBI hydrographic layer. Edge-match between adjacent map sheets to keep the topological consistency. Geometric feature adjustment by rubber sheeting or polynomial transformation.

Feature Codification

<table>
<thead>
<tr>
<th>Feature</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>KHY (Kahayan)</td>
<td>29</td>
<td>Land System Group Textur Depth Drainage Nu trient Facets Fragmentation Reliability Water Source Ground Water Land System Soil Hydrology Climate Physiography Lithology Landform</td>
</tr>
</tbody>
</table>

Database Design

An Example of RePPProT Land system layer superimposed onto the RBI hydrographic layer (sheet 1408).

KHY PTG

RePPProT Coordenate RBI Coordenate

Use for Spatial Land Use Planning

<table>
<thead>
<tr>
<th>Use for Spatial Land Use Planning</th>
<th>Agriculture Development</th>
<th>Agroforestry Development</th>
<th>Forest Conservation</th>
<th>Natural Hazard mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Development Zone</td>
<td>Conservation Zone</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Metadata Creation

This effort is to provide information about land system data that make users easy to access and use the data for their purposes. Standardized metadata is modified from the Federal Geographic Data Committee (FGDC). The metadata database software being developed is used for entering, storing, retrieving, and releasing information. The metadata database that can be transferred over the internet is to support BAKOSURTANAL’s clearing house role.
1. Land system database provides physical characteristics of Indonesia land resource such as lithology, hydrology, climate, topography, vegetation, and soil.

2. Due to the various reliabilities, land system data with low reliability should be updated.

3. The standardized land systems are expected to be easily accessed and integrated with other thematic data by related agencies for spatial land use planning.