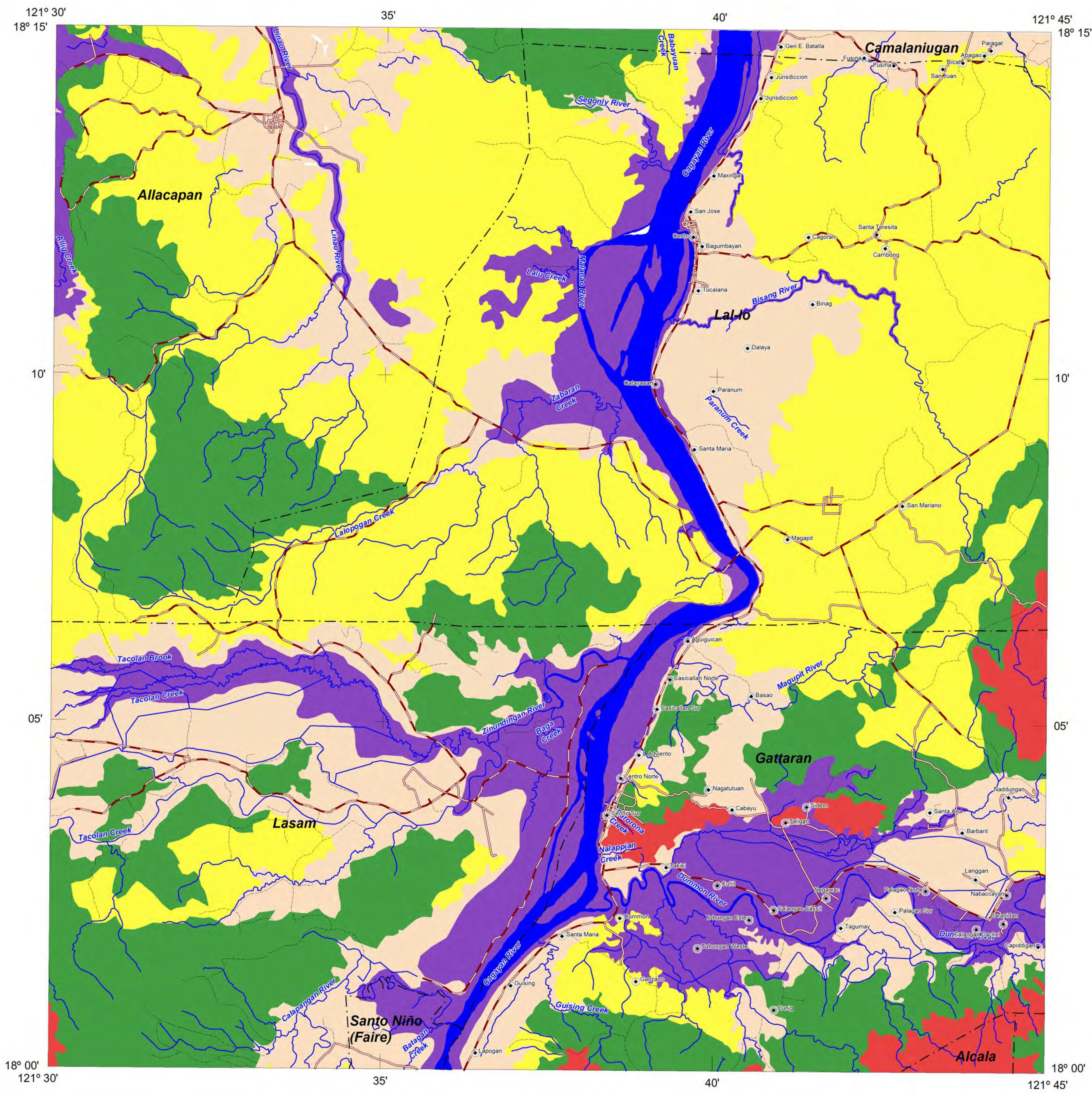
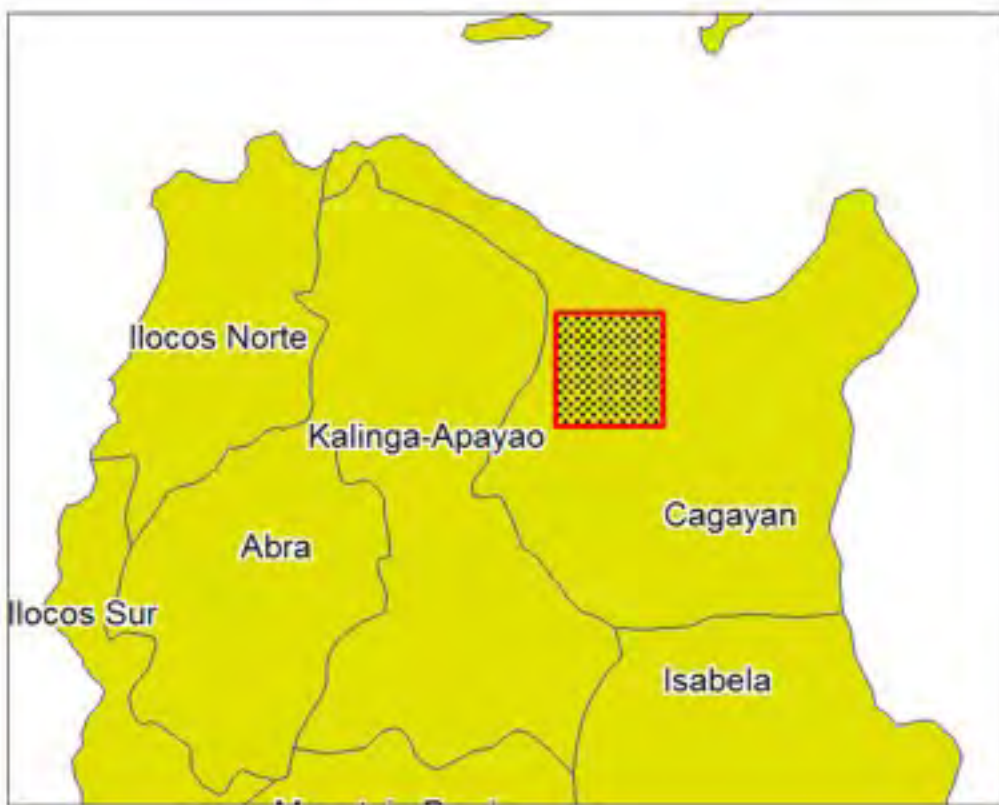


LANDSLIDE AND FLOOD SUSCEPTIBILITY MAP OF GATTARAN QUADRANGLE CAGAYAN PROVINCE, PHILIPPINES



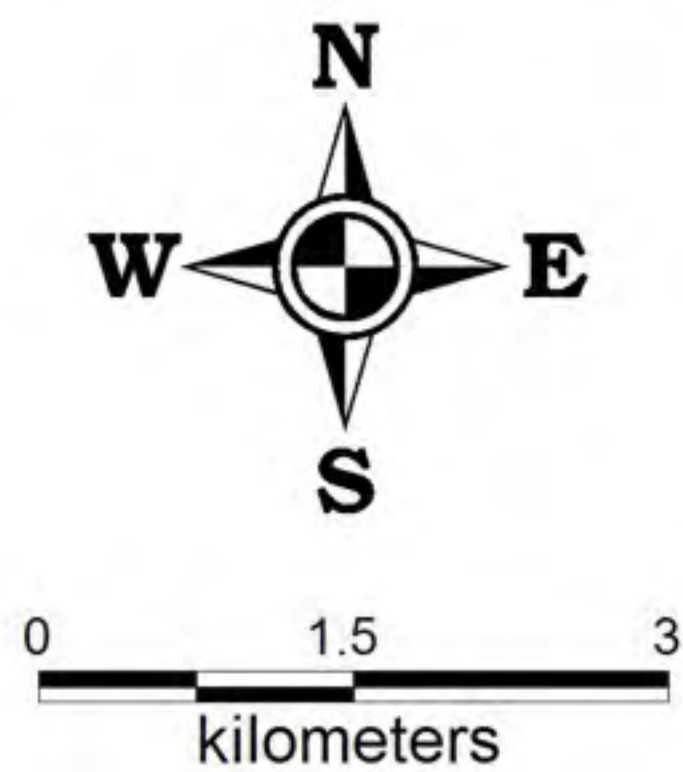
INDEX MAP



LEGEND :

- High susceptibility to landslide**
Areas with high landslide susceptibility rating have active/recent landslides and tension cracks that would directly affect the community. Those with steep slopes and drainages that are prone to landslide damming are also highly susceptible to landslides.
- Moderate susceptibility to landslide**
Areas with moderate landslide susceptibility rating have inactive/old landslides and tension cracks which are located away from the community. These areas usually have moderate slopes.
- Low susceptibility to landslide**
Areas with low to gentle slopes and lacking tension cracks have low landslide susceptibility rating.
- High susceptibility to flooding**
Areas with greater than 1 meter flood height. These areas are usually flooded for several hours during heavy rains; include landforms of topographic lows such as active river channels, abandoned river channels and areas along river banks; also prone to flashfloods.
- Low to moderate susceptibility to flooding**
Areas with less than 1.0 meter flood height. These are usually inundated during prolonged and extensive heavy rainfall or extreme weather condition

- Roads
- River
- Municipal boundary
- Barangay center location



TRANSVERSE MERCATOR PROJECTION
MAPPING SCALE 1:50,000

GIS Processing :
Lands Geological Survey Division

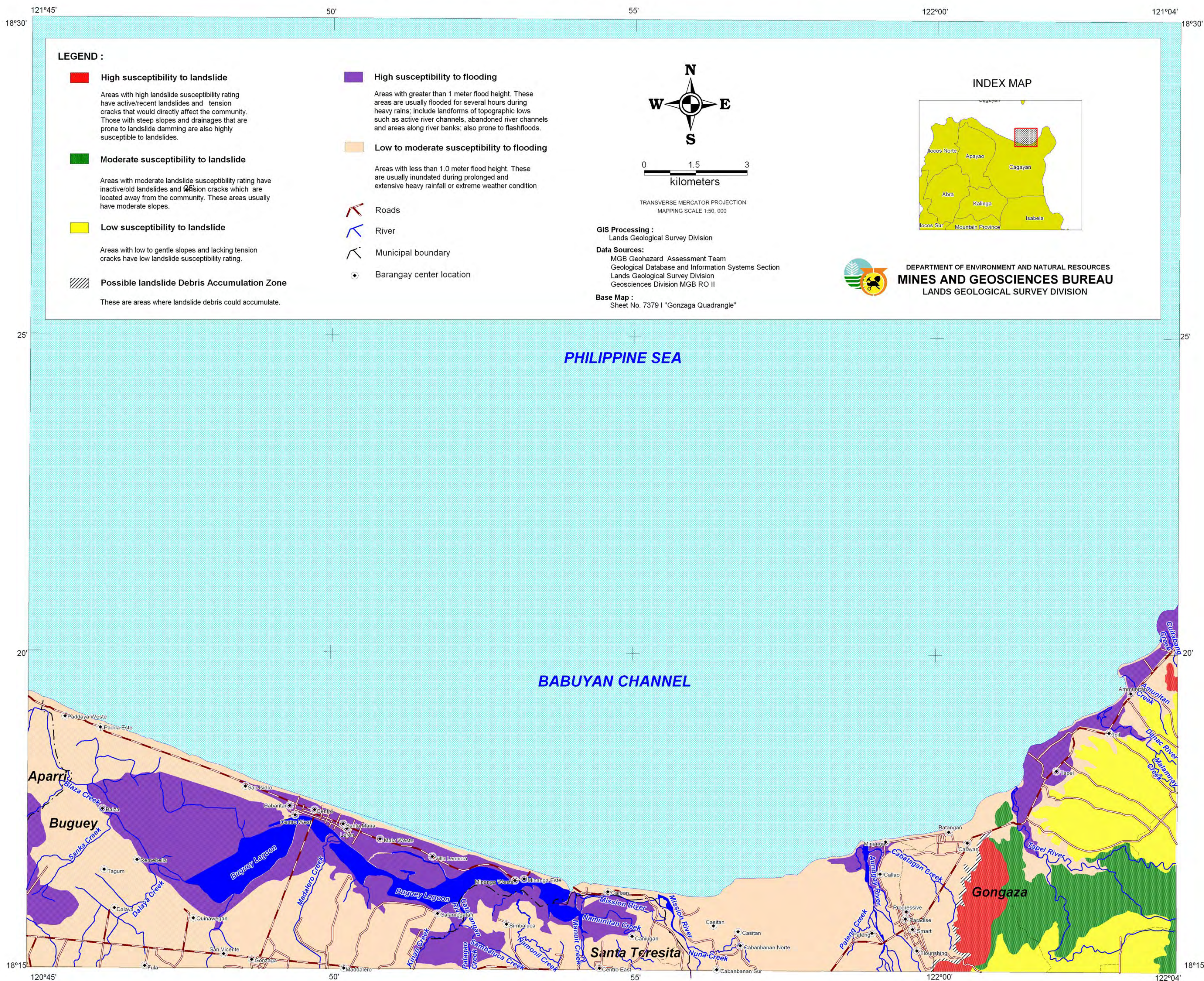
Data Sources:
MGB Geohazard Assessment Team
Geological Database and Information Systems Section
Lands Geological Survey Division
Geosciences Division MGB RO II

Base Map :
Sheet No. 7379 III "Gattaran Quadrangle"

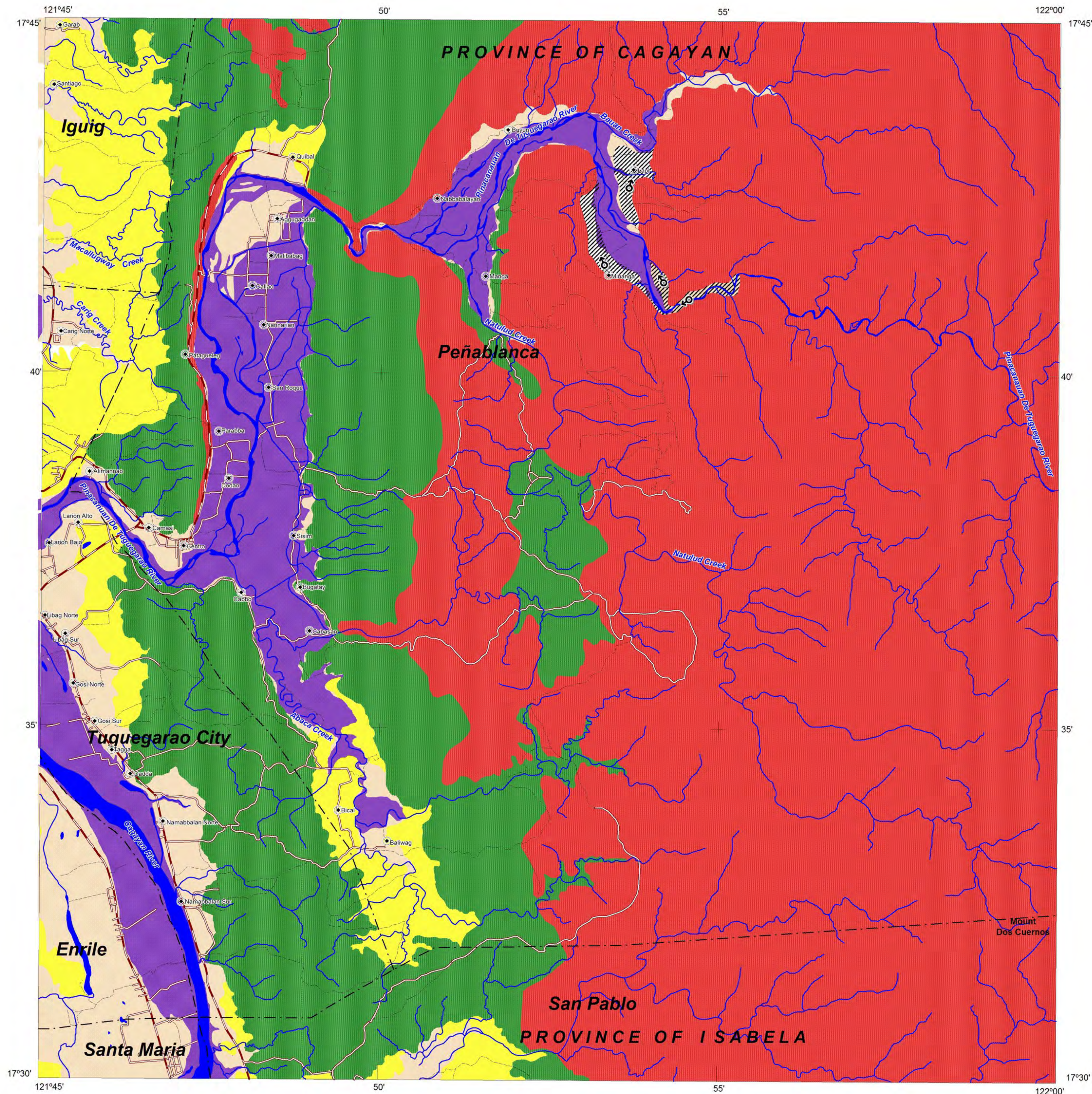


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LANDS GEOLOGICAL SURVEY DIVISION

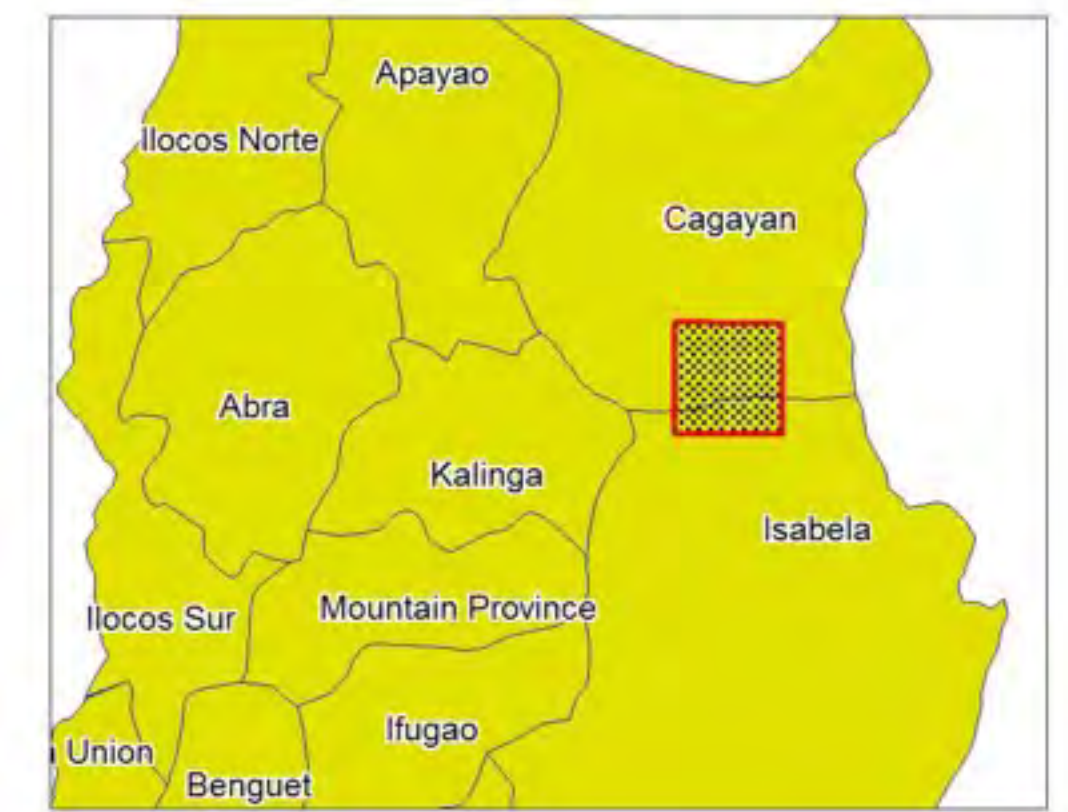
LANDSLIDE AND FLOOD SUSCEPTIBILITY MAP OF GONZAGA QUADRANGLE CAGAYAN PROVINCE, PHILIPPINES



LANDSLIDE AND FLOOD SUSCEPTIBILITY MAP OF PEÑABLANCA QUADRANGLE CAGAYAN AND ISABELA PROVINCES, PHILIPPINES



INDEX MAP



LEGEND :

- **High susceptibility to landslide**
Areas with high landslide susceptibility rating have active/recent landslides and tension cracks that would directly affect the community. Those with steep slopes and drainages that are prone to landslide damming are also highly susceptible to landslides.
- **Moderate susceptibility to landslide**
Areas with moderate landslide susceptibility rating have inactive/old landslides and tension cracks which are located away from the community. These areas usually have moderate slopes.
- **Low susceptibility to landslide**
Areas with low to gentle slopes and lacking tension cracks have low landslide susceptibility rating.
- ▨ **Possible landslide Debris Accumulation Zone**
These are areas where landslide debris could accumulate.
- **High susceptibility to flooding**
Areas with greater than 1 meter flood height. These areas are usually flooded for several hours during heavy rains; include landforms of topographic lows such as active river channels, abandoned river channels and areas along river banks; also prone to flashfloods.
- **Low to moderate susceptibility to flooding**
Areas with less than 1.0 meter flood height. These are usually inundated during prolonged and extensive heavy rainfall or extreme weather condition
- Roads
- River
- Municipal boundary
- Barangay center location
- ↗ Debris flow direction



0 1.5 3
kilometers

TRANSVERSE MERCATOR PROJECTION
MAPPING SCALE 1:50,000

GIS Processing :
Lands Geological Survey Division

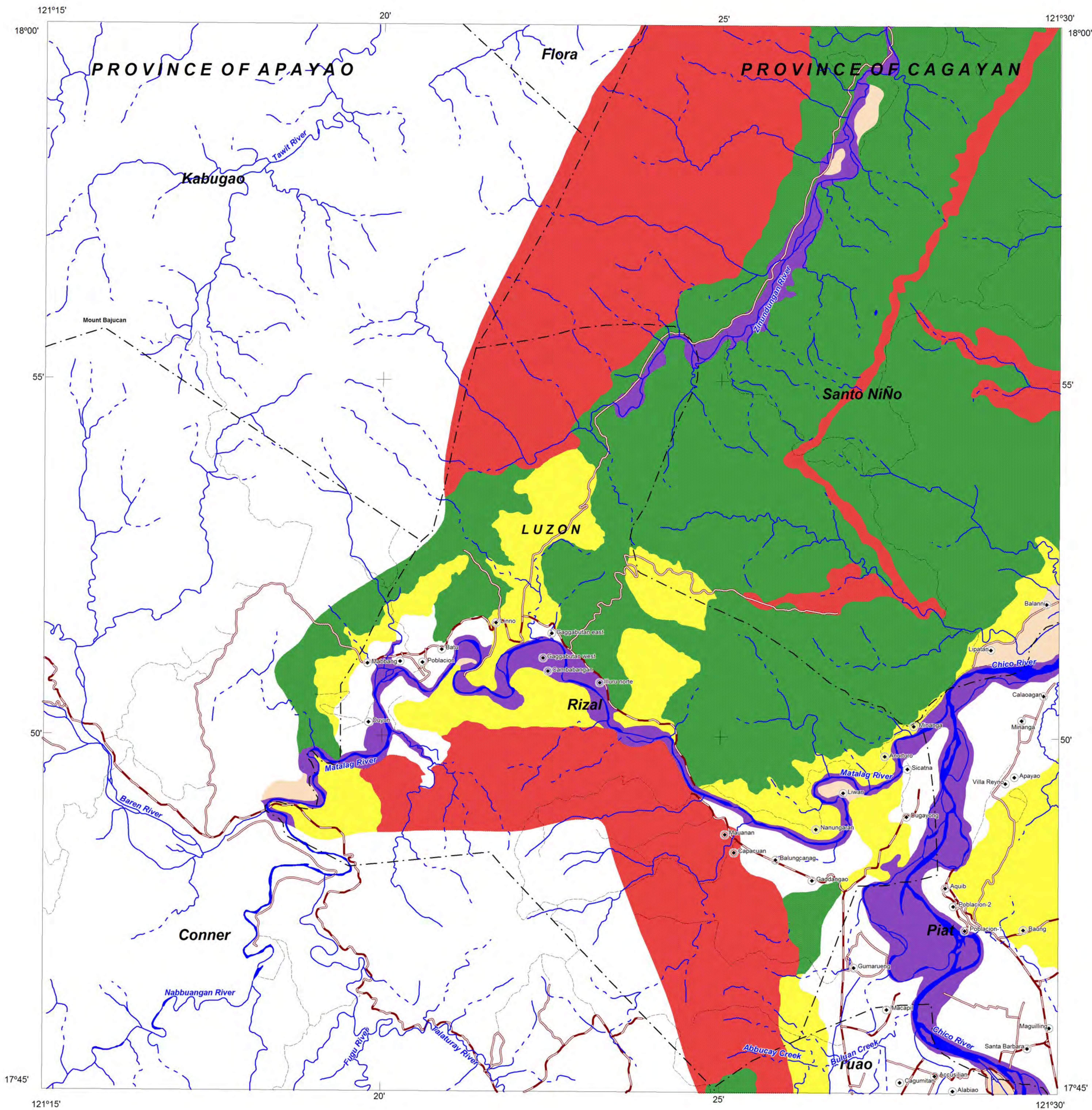
Data Sources:
MGB Geohazard Assessment Team
Geological Database and Information Systems Section
Lands Geological Survey Division
Geosciences Division MGB RO II

Base Map :
Sheet No. 7378 II "Peñablanca Quadrangle"

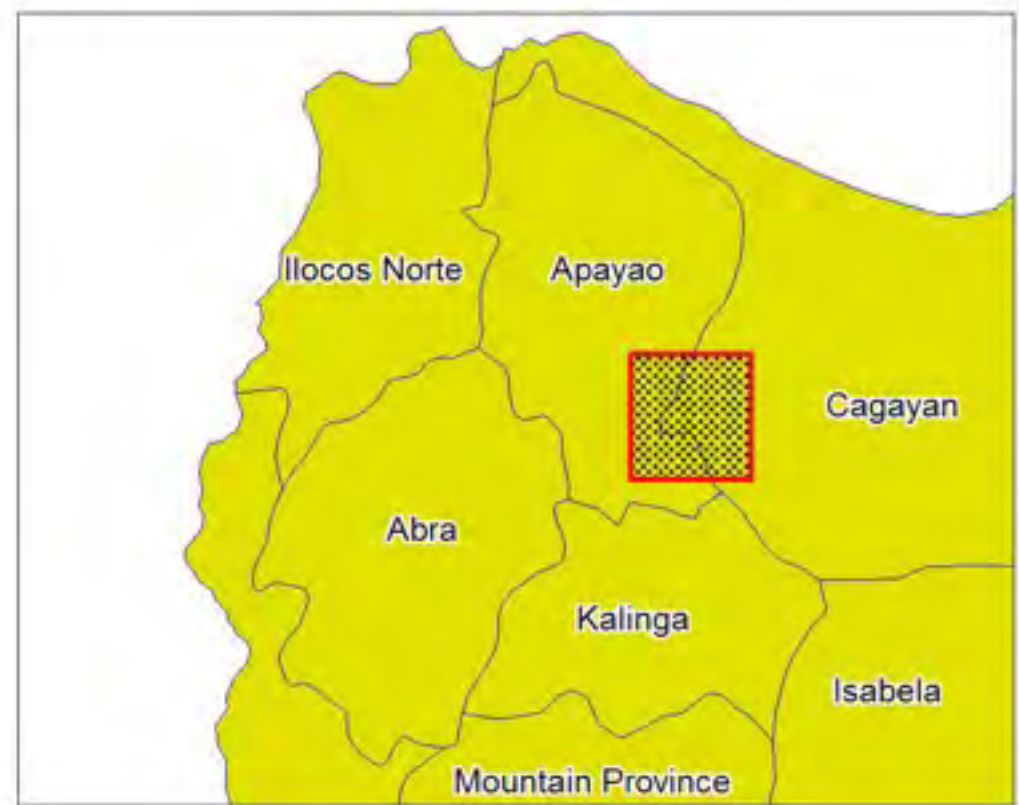


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LANDSLIDE AND FLOOD SUSCEPTIBILITY MAP OF PIAT QUADRANGLE CAGAYAN PROVINCE, PHILIPPINES



INDEX MAP



LEGEND :

- High susceptibility to landslide**
Areas with high landslide susceptibility rating have active/recent landslides and tension cracks that would directly affect the community. Those with steep slopes and drainages that are prone to landslide damming are also highly susceptible to landslides.
- Moderate susceptibility to landslide**
Areas with moderate landslide susceptibility rating have inactive/old landslides and tension cracks which are located away from the community. These areas usually have moderate slopes.
- Low susceptibility to landslide**
Areas with low to gentle slopes and lacking tension cracks have low landslide susceptibility rating.
- High susceptibility to flooding**
Areas with greater than 1 meter flood height. These areas are usually flooded for several hours during heavy rains; include landforms of topographic lows such as active river channels, abandoned river channels and areas along river banks; also prone to flashfloods.
- Low to moderate susceptibility to flooding**
Areas with less than 1.0 meter flood height. These are usually inundated during prolonged and extensive heavy rainfall or extreme weather condition

- Roads
- River
- Municipal boundary
- Barangay center location



0 1.5 3
kilometers

TRANSVERSE MERCATOR PROJECTION
MAPPING SCALE 1:50,000

GIS Processing :
Lands Geological Survey Division

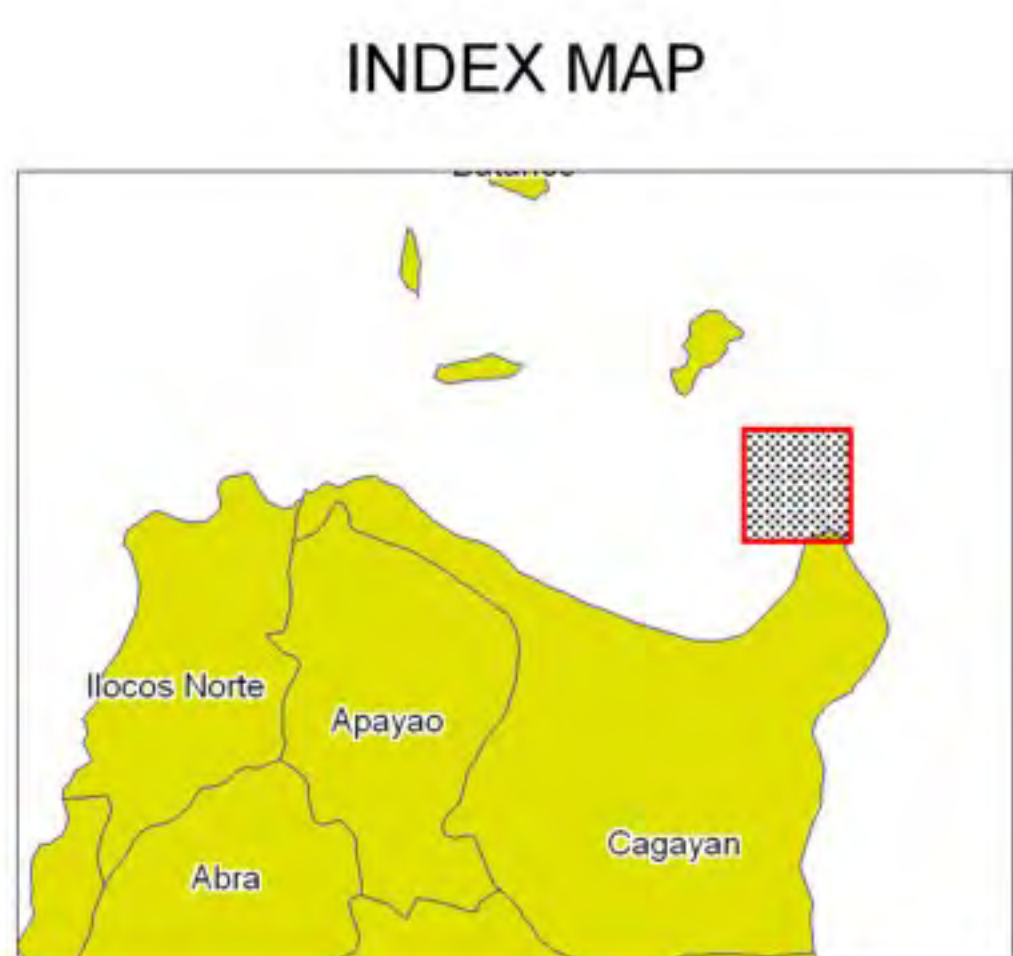
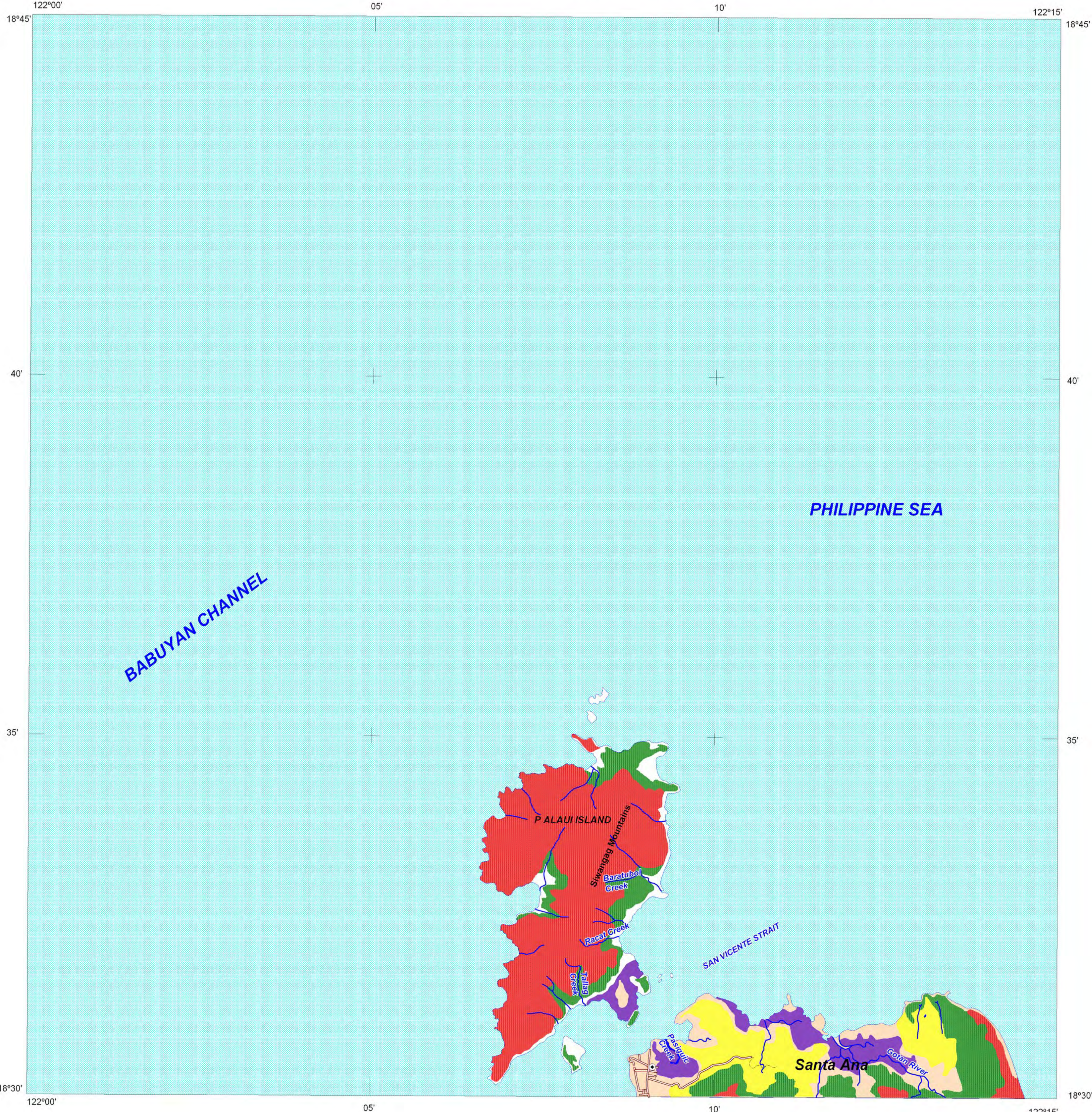
Data Sources:
MGB Geohazard Assessment Team
Geological Database and Information Systems Section
Lands Geological Survey Division
Geosciences Division MGB RO II

Base Map :
Sheet No. 7278 I "Piat Quadrangle"



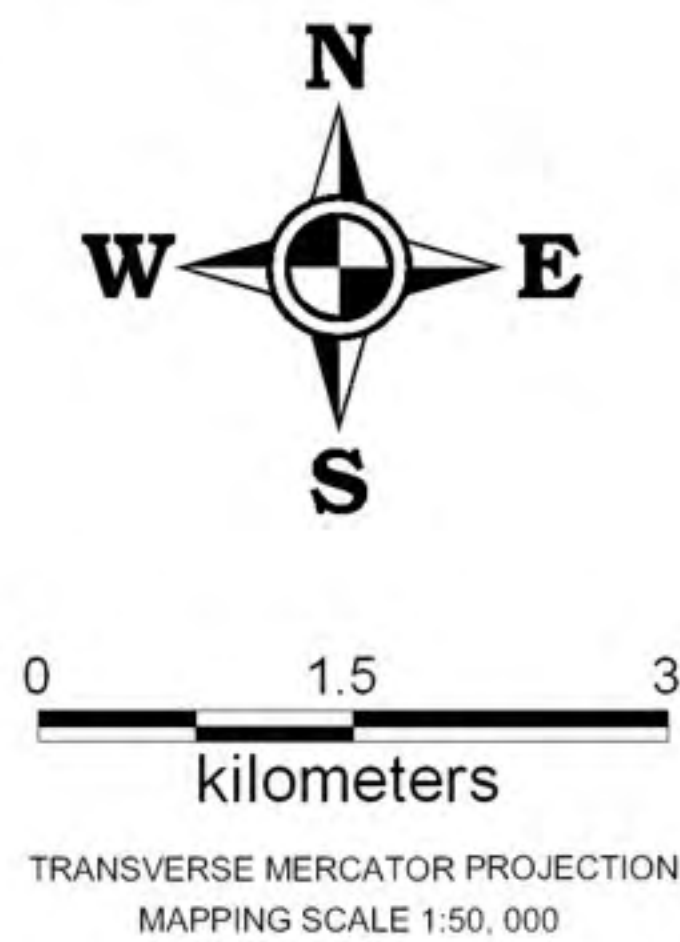
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LANDS GEOLOGICAL SURVEY DIVISION

LANDSLIDE AND FLOOD SUSCEPTIBILITY MAP OF SAN VICENTE QUADRANGLE CAGAYAN PROVINCE, PHILIPPINES



LEGEND :

- High susceptibility to landslide**
Areas with high landslide susceptibility rating have active/recent landslides and tension cracks that would directly affect the community. Those with steep slopes and drainages that are prone to landslide damming are also highly susceptible to landslides.
- Moderate susceptibility to landslide**
Areas with moderate landslide susceptibility rating have inactive/old landslides and tension cracks which are located away from the community. These areas usually have moderate slopes.
- Low susceptibility to landslide**
Areas with low to gentle slopes and lacking tension cracks have low landslide susceptibility rating.
- High susceptibility to flooding**
Areas with greater than 1 meter flood height. These areas are usually flooded for several hours during heavy rains; include landforms of topographic lows such as active river channels, abandoned river channels and areas along river banks; also prone to flashfloods.
- Low to moderate susceptibility to flooding**
Areas with less than 1.0 meter flood height. These are usually inundated during prolonged and extensive heavy rainfall or extreme weather condition.
- Roads**
- River**
- Municipal boundary**
- Barangay center location**

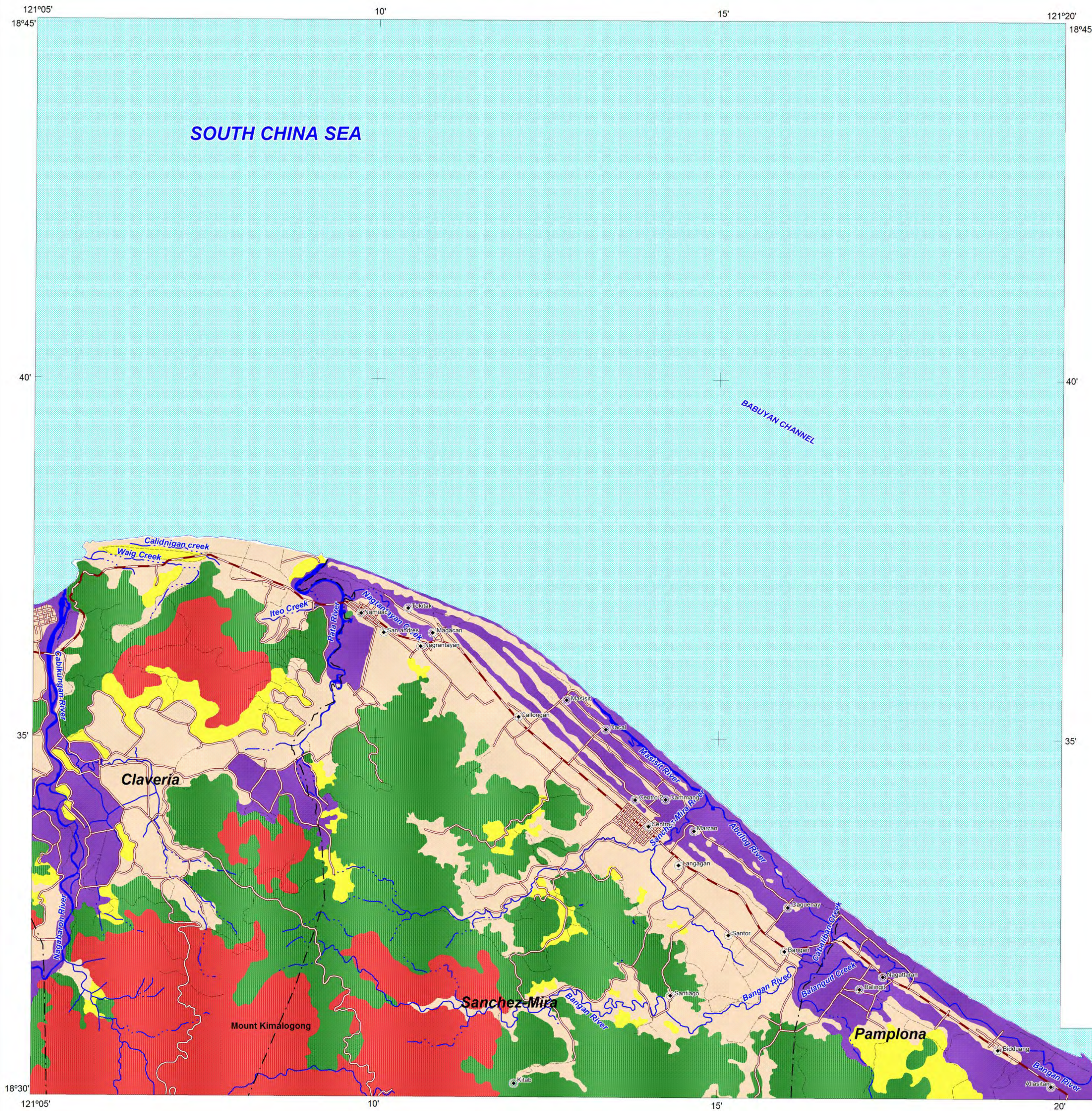


GIS Processing :
Lands Geological Survey Division

Data Sources:
MGB Geohazard Assessment Team
Geological Database and Information Systems Section
Lands Geological Survey Division
Geosciences Division MGB RO II

Base Map :
Sheet No. 7480 III "San Vicente Quadrangle"

LANDSLIDE AND FLOOD SUSCEPTIBILITY MAP OF SANCHEZ MIRA QUADRANGLE CAGAYAN PROVINCE, PHILIPPINES



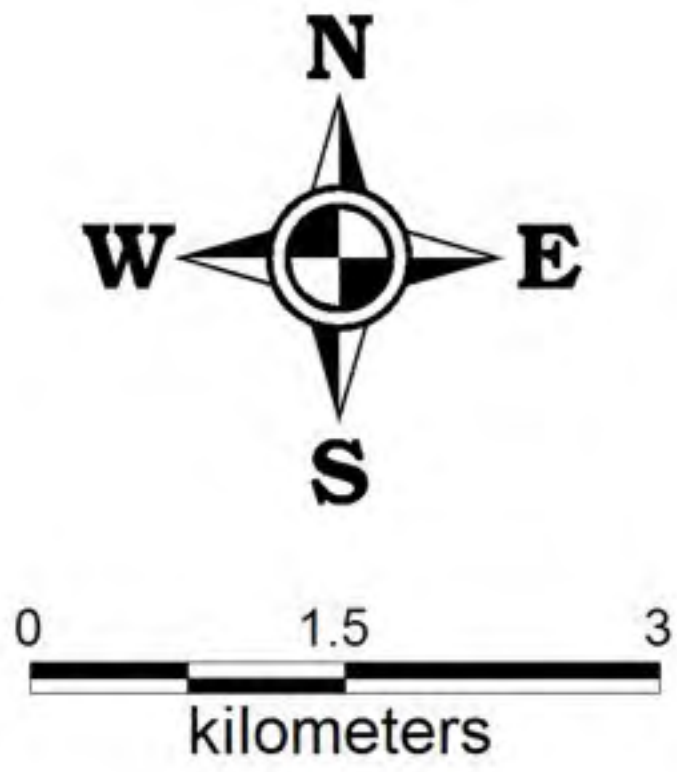
INDEX MAP



LEGEND :

- High susceptibility to landslide**
Areas with high landslide susceptibility rating have active/recent landslides and tension cracks that would directly affect the community. Those with steep slopes and drainages that are prone to landslide damming are also highly susceptible to landslides.
- Moderate susceptibility to landslide**
Areas with moderate landslide susceptibility rating have inactive/old landslides and tension cracks which are located away from the community. These areas usually have moderate slopes.
- Low susceptibility to landslide**
Areas with low to gentle slopes and lacking tension cracks have low landslide susceptibility rating.
- High susceptibility to flooding**
Areas with greater than 1 meter flood height. These areas are usually flooded for several hours during heavy rains; include landforms of topographic lows such as active river channels, abandoned river channels and areas along river banks; also prone to flashfloods.
- Low to moderate susceptibility to flooding**
Areas with less than 1.0 meter flood height. These areas are usually inundated during prolonged and extensive heavy rainfall or extreme weather condition.

- Roads
- River
- Municipal boundary
- Barangay center location



TRANSVERSE MERCATOR PROJECTION
MAPPING SCALE 1:50,000

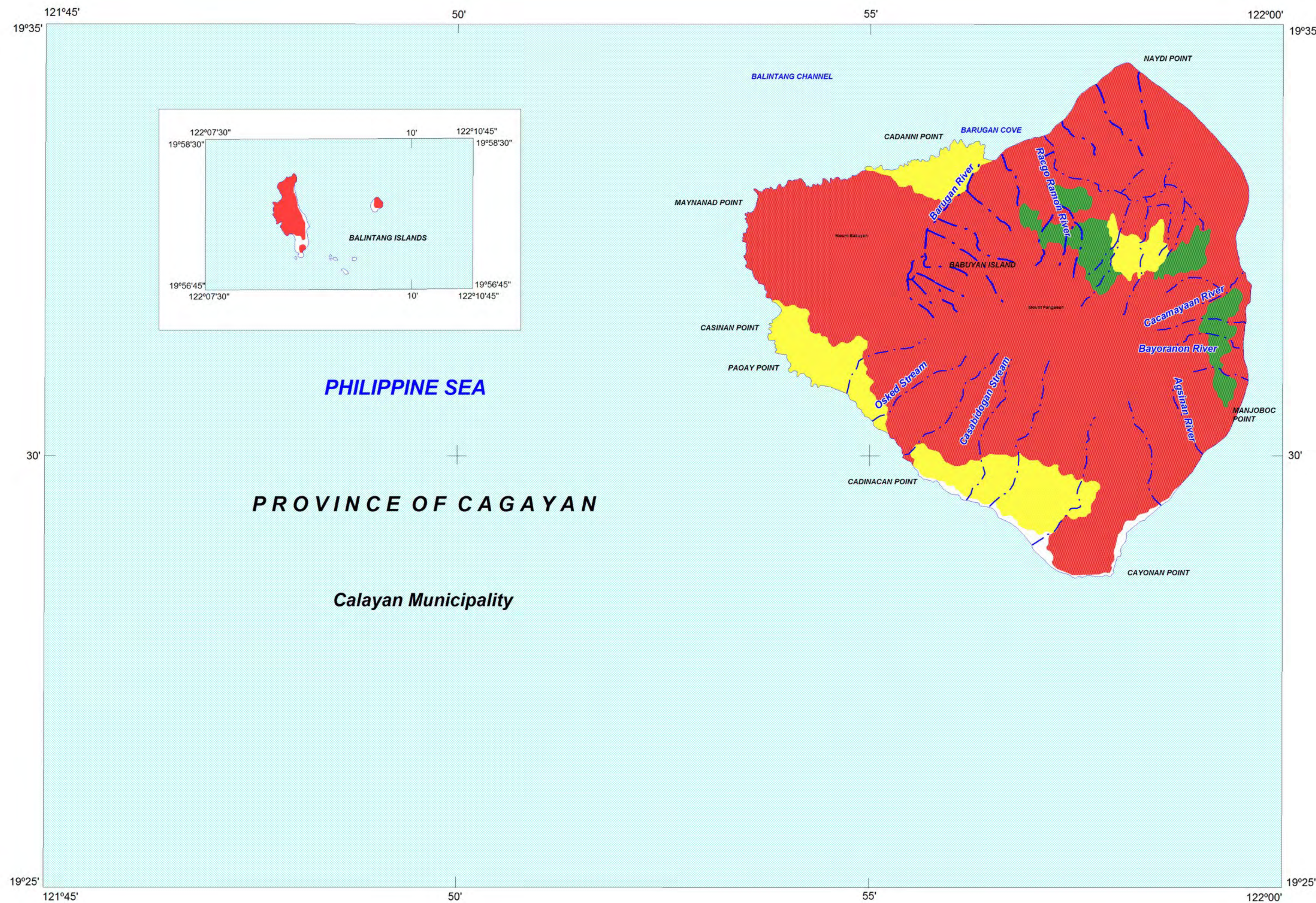
GIS Processing :
Lands Geological Survey Division

Data Sources:
MGB Geohazard Assessment Team
Geological Database and Information Systems Section
Lands Geological Survey Division
Geosciences Division MGB RO II

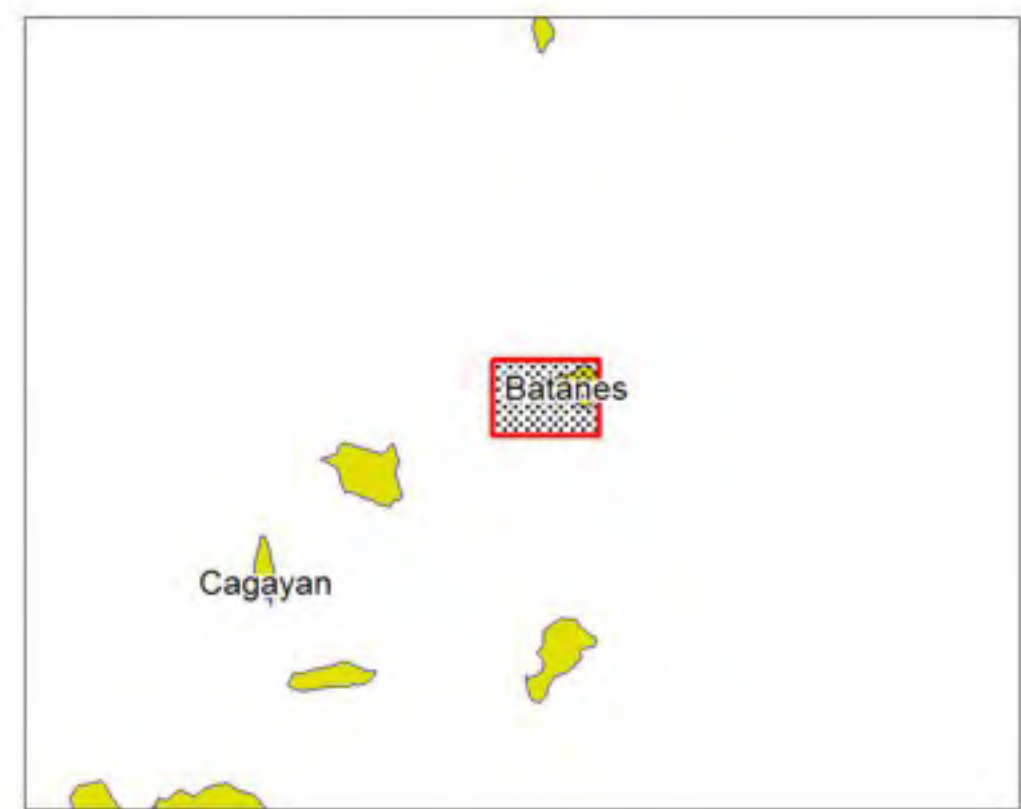
Base Map :
Sheet No. 7280 III "Sanchez Mira Quadrangle"



LANDSLIDE SUSCEPTIBILITY MAP OF SAN DIONISIO QUADRANGLE BATANES PROVINCE, PHILIPPINES



INDEX MAP



LEGEND :

- High susceptibility to landslide**
Areas with high landslide susceptibility rating have active/recent landslides and tension cracks that would directly affect the community. Those with steep slopes and drainages that are prone to landslide damming are also highly susceptible to landslides.
- Moderate susceptibility to landslide**
Areas with moderate landslide susceptibility rating have inactive/old landslides and tension cracks which are located away from the community. These areas usually have moderate slopes.
- Low susceptibility to landslide**
Areas with low to gentle slopes and lacking tension cracks have low landslide susceptibility rating.



0 1.5 3
kilometers

TRANSVERSE MERCATOR PROJECTION
MAPPING SCALE 1:50, 000

GIS Processing :
Lands Geological Survey Division

Data Sources:
MGB Geohazard Assessment Team
Geological Database and Information Systems Section
Lands Geological Survey Division
Geosciences Division MGB RO II

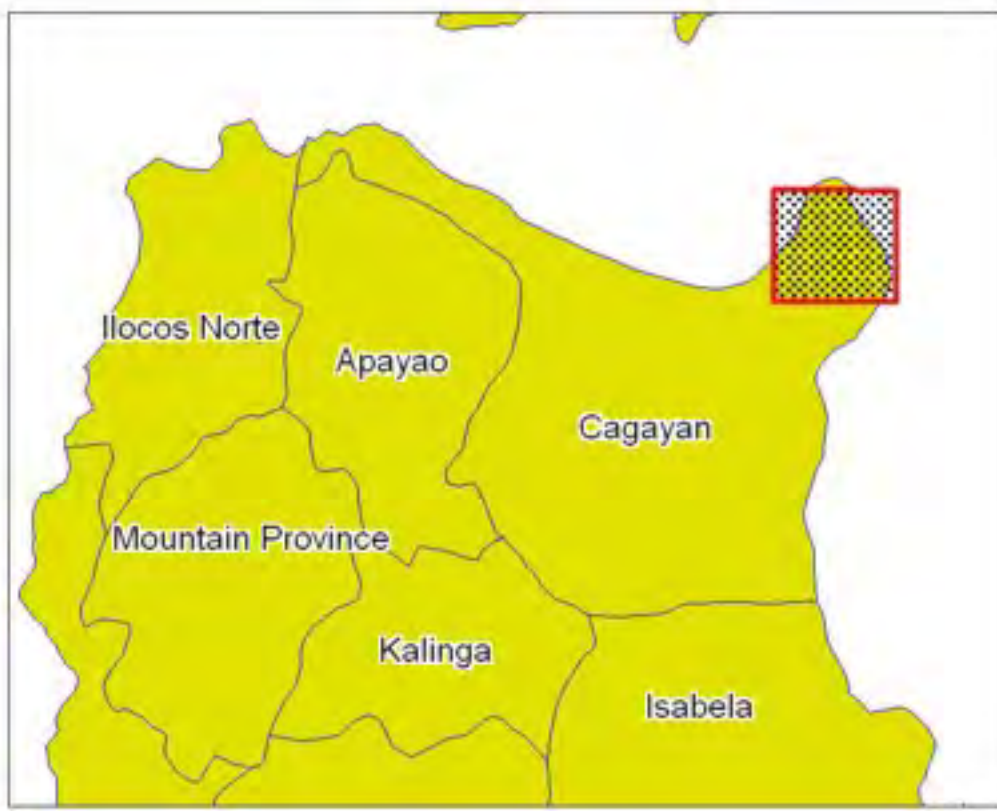
Base Map :
Sheet No. 3378 I "San Dionisio Quadrangle"



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LANDSLIDE AND FLOOD SUSCEPTIBILITY MAP OF SANTA ANA QUADRANGLE CAGAYAN PROVINCE, PHILIPPINES

INDEX MAP



LEGEND :

- High susceptibility to landslide**
Areas with high landslide susceptibility rating have active/recent landslides and tension cracks that would directly affect the community. Those with steep slopes and drainages that are prone to landslide damming are also highly susceptible to landslides.
 - Moderate susceptibility to landslide**
Areas with moderate landslide susceptibility rating have inactive/old landslides and tension cracks which are located away from the community. These areas usually have moderate slopes.
 - Low susceptibility to landslide**
Areas with low to gentle slopes and lacking tension cracks have low landslide susceptibility rating.
 - High susceptibility to flooding**
Areas with greater than 1 meter flood height. These areas are usually flooded for several hours during heavy rains; include landforms of topographic lows such as active river channels, abandoned river channels and areas along river banks; also prone to flashfloods.
 - Low to moderate susceptibility to flooding**
Areas with less than 1.0 meter flood height. These are usually inundated during prolonged and extensive heavy rainfall or extreme weather condition.
- Roads
River
Municipal boundary
Barangay center location



0 1.5 3
kilometers

TRANSVERSE MERCATOR PROJECTION
MAPPING SCALE 1:50,000

GIS Processing :
Lands Geological Survey Division

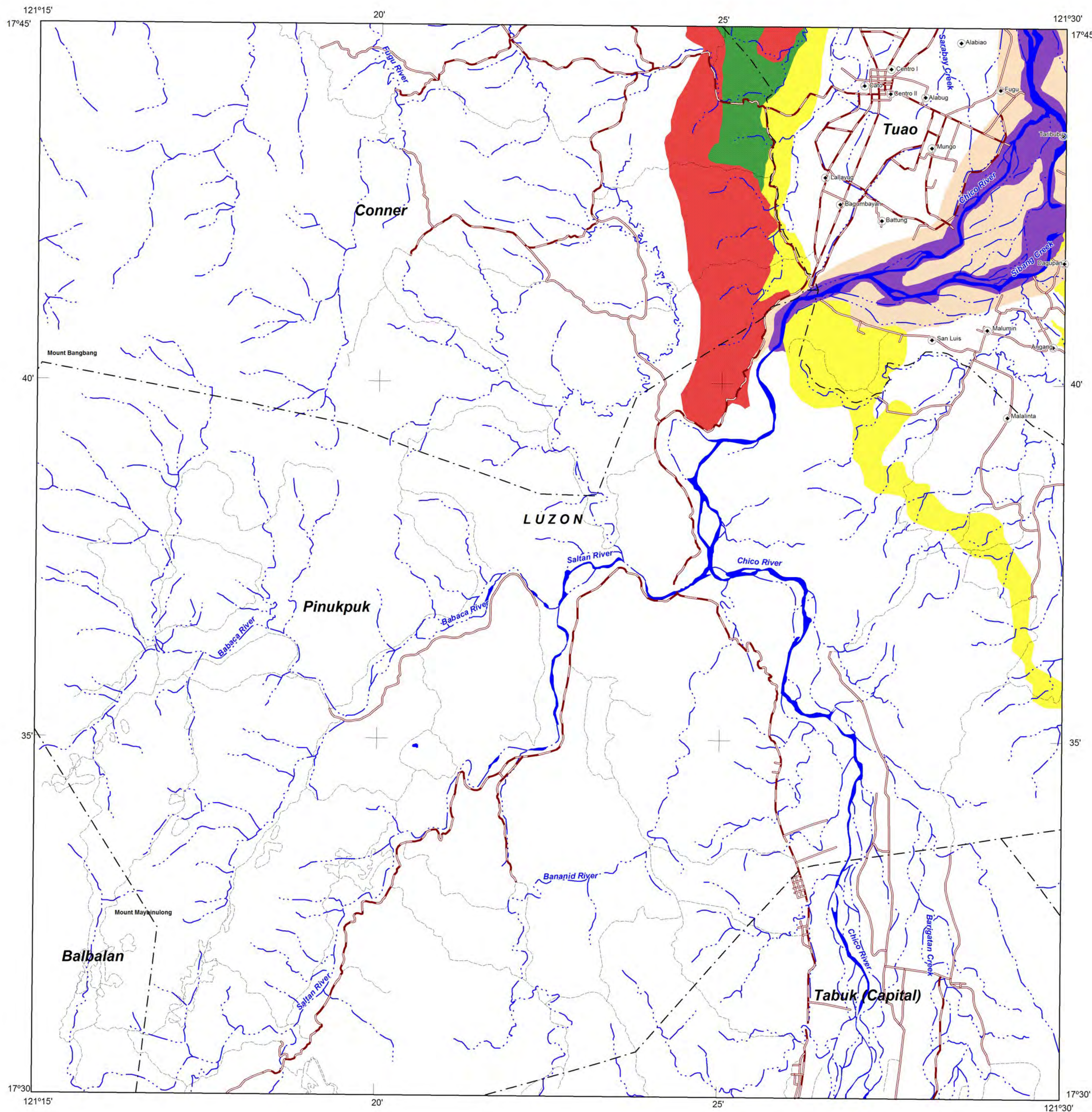
Data Sources:
MGB Geohazard Assessment Team
Geological Database and Information Systems Section
Lands Geological Survey Division
Geosciences Division MGB RO II

Base Map :
Sheet No. 7479 IV "Santa Ana Quadrangle"

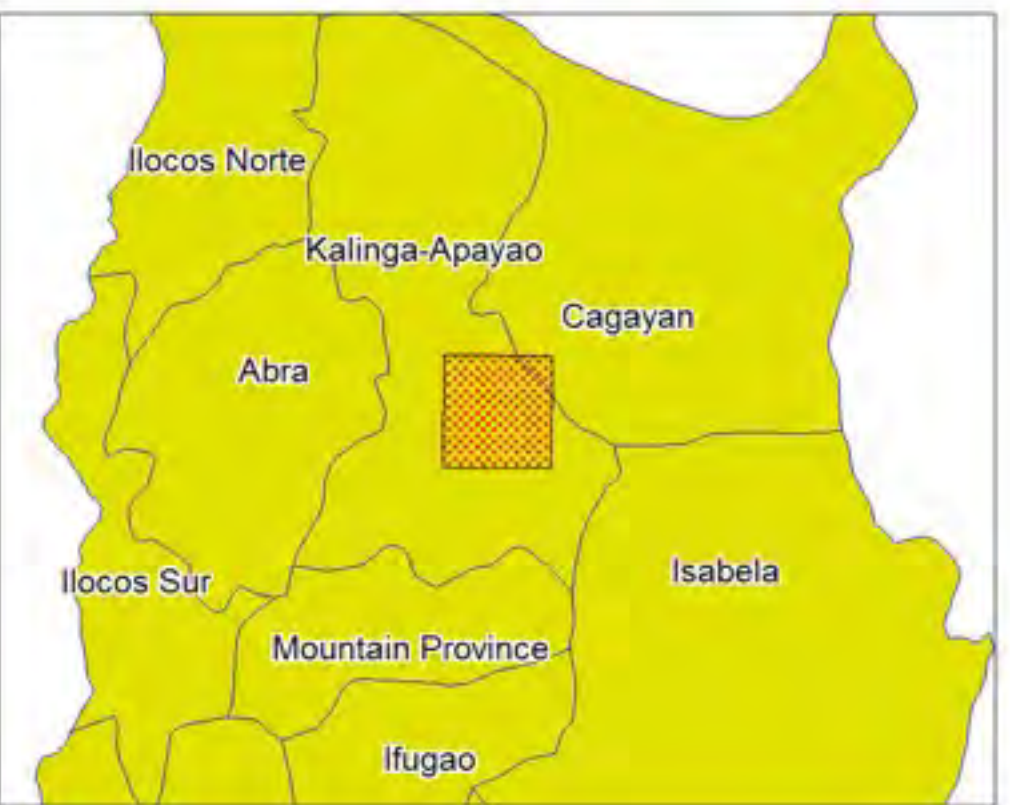


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LANDSLIDE AND FLOOD SUSCEPTIBILITY MAP OF TUAO QUADRANGLE CAGAYAN PROVINCE, PHILIPPINES



INDEX MAP



LEGEND :

- High susceptibility to landslide**
Areas with high landslide susceptibility rating have active/recent landslides and tension cracks that would directly affect the community. Those with steep slopes and drainages that are prone to landslide damming are also highly susceptible to landslides.
 - Moderate susceptibility to landslide**
Areas with moderate landslide susceptibility rating have inactive/old landslides and tension cracks which are located away from the community. These areas usually have moderate slopes.
 - Low susceptibility to landslide**
Areas with low to gentle slopes and lacking tension cracks have low landslide susceptibility rating.
 - High susceptibility to flooding**
Areas with greater than 1 meter flood height. These areas are usually flooded for several hours during heavy rains; include landforms of topographic lows such as active river channels, abandoned river channels and areas along river banks; also prone to flashfloods.
 - Low to moderate susceptibility to flooding**
Areas with less than 1.0 meter flood height. These are usually inundated during prolonged and extensive heavy rainfall or extreme weather condition.
- Legend symbols:
- Roads
 - River
 - Municipal boundary
 - Barangay center location



0 1.5 3
kilometers

TRANSVERSE MERCATOR PROJECTION
MAPPING SCALE 1:50,000

GIS Processing :
Lands Geological Survey Division

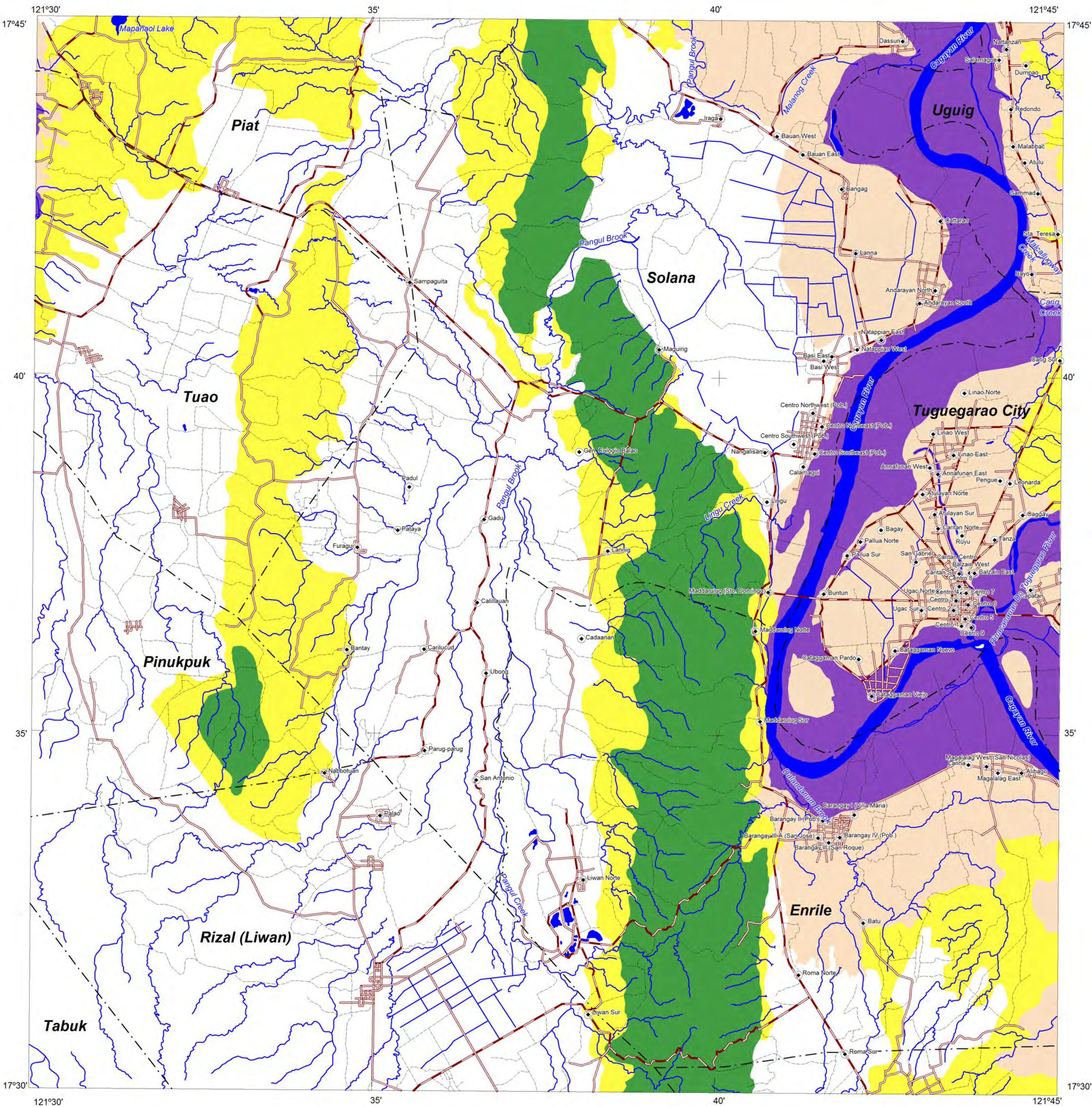
Data Sources:
MGB Geohazard Assessment Team
Geological Database and Information Systems Section
Lands Geological Survey Division
Geosciences Division MGB RO II

Base Map :
Sheet No. 7278 II "Tuao Quadrangle"

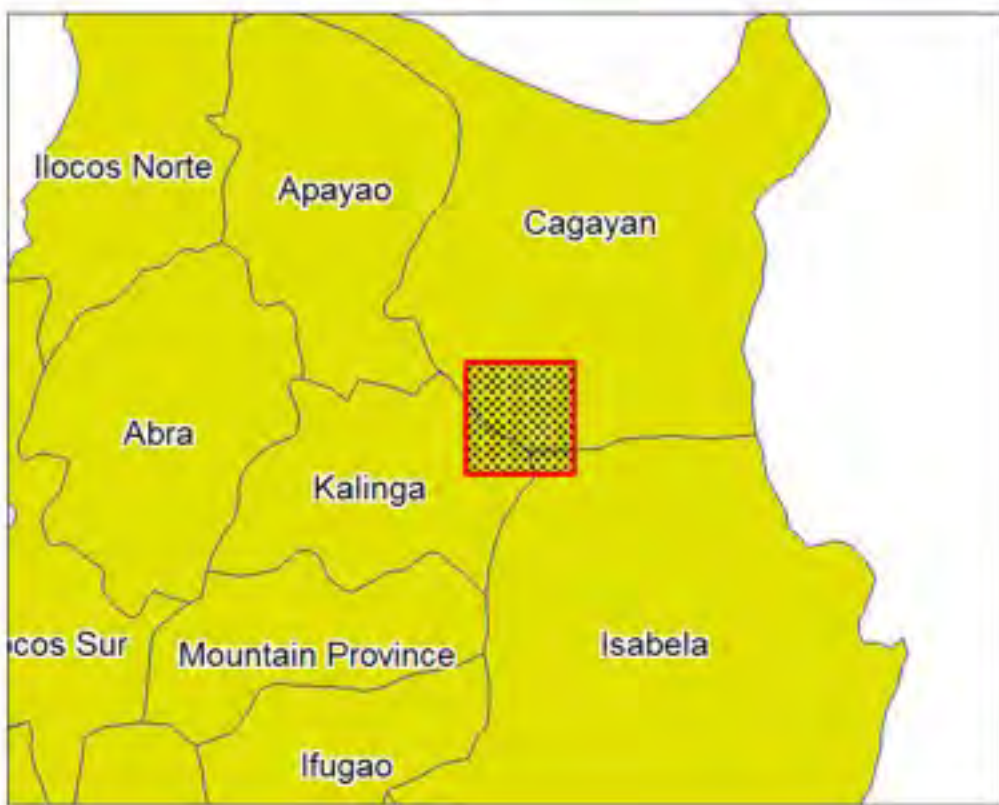


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LANDSLIDE AND FLOOD SUSCEPTIBILITY MAP OF TUGUEGARAO QUADRANGLE CAGAYAN PROVINCE, PHILIPPINES



INDEX MAP



LEGEND :

- Low susceptibility to landslide**
Areas with low to gentle slopes and lacking tension cracks have low landslide susceptibility rating.
- Moderate susceptibility to landslide**
Areas with moderate landslide susceptibility rating have inactive/old landslides and tension cracks which are located away from the community. These areas usually have moderate slopes.
- High susceptibility to flooding**
Areas with greater than 1 meter flood height. These areas are usually flooded for several hours during heavy rains; include landforms of topographic lows such as active river channels, abandoned river channels and areas along river banks; also prone to flashfloods.
- Low to moderate susceptibility to flooding**
Areas with less than 1.0 meter flood height. These are usually inundated during prolonged and extensive heavy rainfall or extreme weather condition

- Roads
- River
- Municipal boundary
- Barangay center location



0 1.5 3
kilometers

TRANSVERSE MERCATOR PROJECTION
MAPPING SCALE 1:50,000

GIS Processing :
Lands Geological Survey Division

Data Sources:
MGB Geohazard Assessment Team
Geological Database and Information Systems Section
Lands Geological Survey Division
Geosciences Division MGB RO II

Base Map :
Sheet No. 7378 III "Tuguegarao Quadrangle"



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