



Republic of the Philippines  
Department of Environment and Natural Resources  
**PROVINCIAL ENVIRONMENT AND NATURAL RESOURCES OFFICE**  
MIMAROPA Region

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## MEMORANDUM

**FOR** : The Regional Director  
MGB MIMAROPA Region  
7/F DENR Building, 1515 Roxas Boulevard,  
Ermita, Manila

**FROM** : The OIC, PENR Officer

**SUBJECT** : **INSPECTION REPORT ON THE COMMERCIAL SAND  
AND GRAVEL (CSAG) EXTRACTION AT GAYAMAT  
RIVER, BARANGAY HARRISON, MUNICIPALITY OF  
PALUAN, OCCIDENTAL MINDORO**

Respectfully forwarded is a copy of the report dated 10 May 2023 of the MGB Embedded Technical Personnel regarding the above subject.

For information, record and further instruction.

  
**ERNESTO E. TAÑADA**

cc: **The Provincial Mining Regulatory Board**  
Occidental Mindoro

**The ENR Officer**  
Provincial Government – Environment and Natural Resources Office  
Capitol, Mamburao, Occidental Mindoro



10 May 2023

**MEMORANDUM**

TO : The OIC, PENR Officer

FROM : The MGB Embedded Technical Personnel

SUBJECT : **INSPECTION REPORT ON THE COMMERCIAL SAND AND GRAVEL (CSAG) EXTRACTION AT GAYAMAT RIVER, BARANGAY HARRISON, MUNICIPALITY OF PALUAN, OCCIDENTAL MINDORO**

**BACKGROUND INFORMATION:**

A Letter dated 28 March 2023 from the Mt. Calavite Wildlife Sanctuary (MCWS) Protected Area Superintendent was lodged in the Provincial Government Office of Occidental Mindoro, addressed to Provincial Governor Eduardo B. Gadiano, pertaining to complaints of Indigenous People (IP) Community members of Barangay Harrison, Paluan on the sand and gravel extraction at Gayamat River, located in the same barangay.

Concerns raised in the said letter include, among others, the alleged destructive effects of ongoing extraction activities, such as riverbank erosion and river widening, which are said to threaten nearby farmlands and increase the risk of flooding during rainy season. Assessment of the area by the MCWS – Protected Area Management Office (PAMO) also revealed that the extraction site is within the protected area.

In response to the foregoing, the Provincial Government – Environment and Natural Resources Office (PG-ENRO) requested that the undersigned inspect the concerned site. The undersigned then proceeded to Gayamat River on 12 April 2023, accompanied by personnel from PG-ENRO, PAMO, and PENRO, to: (1) assess the extent and nature of the ongoing quarrying operations in the river, (2) conduct aerial survey and photo documentation using UAV-drone, and (3) gather information and conduct interviews with concerned entities about the activity.



## FIELD FINDINGS:

Presented below are the compiled information and field findings acquired by the undersigned during the undertaking:

1. The inspected site at Gayamat River in Barangay Harrison is located approximately six (6) kilometers aerial distance northwest of Paluan Municipal Hall and is accessible by any utility vehicles via roadways and thoroughfares from the town proper.
2. According to the PG-ENRO's record of active Commercial Sand and Gravel (CSAG) Permits in Occidental Mindoro as of April 2023, a CSAG permit is granted to the proponent Mr. Edwin R. Raci for the sand and gravel extraction project at Gayamat River, covering a total land area of 32,884 square meters (3.2884 hectares). The river quarry area is defined by the following geographic coordinates (PRS '92 projection) based on the submitted survey plan:

Corner	Latitude	Longitude	Corner	Latitude	Longitude
1	13 25' 26.08"	120 24' 32.87"	11	13 25' 50.46"	120 24' 32.85"
2	13 25' 30.35"	120 24' 33.08"	12	13 25' 50.75"	120 24' 34.15"
3	13 25' 31.18"	120 24' 05.05"	13	13 25' 46.08"	120 24' 33.75"
4	13 25' 32.32"	120 24' 31.60"	14	13 25' 42.49"	120 24' 34.57"
5	13 25' 34.26"	120 24' 32.42"	15	13 25' 38.41"	120 24' 36.51"
6	13 25' 38.06"	120 24' 33.97"	16	13 25' 33.77"	120 24' 32.98"
7	13 25' 39.13"	120 24' 34.55"	17	13 25' 31.00"	120 24' 33.79"
8	13 25' 42.62"	120 24' 33.78"	18	13 25' 29.73"	120 24' 35.07"
9	13 25' 44.49"	120 24' 33.07"	19	13 25' 25.50"	120 24' 35.30"
10	13 25' 47.96"	120 24' 33.01"	***Nothing Follows***		

3. Quarrying operations of Mr. Raci has been reportedly *destructive*, citing that the activity allegedly involved scouring the riverbanks with heavy equipment to extract boulder-sized aggregates, which has resulted in the widening of the river channel. This is according to the monitoring activities regularly conducted by the MCWS-PAMO since the complaint was lodged in their office.
4. The following were noted during the site inspection:
  - a. Riverbed within the main channel of Gayamat River was dry, heavily silted with cobble to boulder-sized deposits (*Figure A-1*), including *armor rocks* located at the upstream section of the river. It is an intermittent stream with a relatively narrow main channel that is often dry throughout the year and which water only flows during incessant heavy rainfall events.
  - b. Actual quarrying operations were not observed at the time of the inspection. However, there are discerned indications of sand and gravel extraction along the inspected river channel, within and *outside* the delineated and approved CSAG Permit boundary of Mr.



Raci. Some of the aggregates were notably placed/dumped along the edges of the riverbed, near its banks. (*Refer to Figure A-2*)

- c. Presence of heavy equipment and conveyances at the site i.e., Sunward SWE210 crawler excavator and dump trucks owned by the operator of the extraction activity (*Refer to Figures A-3 and A-6*), with the excavator being spotted at a ground distance of approximately 540 meters from the northern boundary of Mr. Raci's approved CSAG extraction site. (*Refer to Figure B-1*)
  - d. Visible tracks of equipment and conveyances used in the presumed extraction activity were observed on the ground surface (*Figure A-4*). These particularly lead towards the upstream segment of the river which contains significant volume of boulder-sized materials (*Figure A-6*).
  - e. Signs of ongoing riverbank erosion along some sections of the river channel (*Figure A-5*) evident by scoured, vertical, moderate to steeply sloping banks with already exposed roots, sediments, and rocks, as well as collapsed/uprooted/toppled vegetation and trees. These are particularly common along outer banks of the channel or cut banks which are areas constantly eroded by impact from high energy river flows.
5. Comparison of processed drone images and Google Earth satellite image (December 2018) revealed the following:
- a. An excavated area located approximately 30 meters west of the upstream main channel of Gayamat River, centered at WGS 1984 geographic coordinates 13° 25' 58.87" N and 120° 24' 37.16" E (*Refer to Figures B-2 and B-3-A-A<sub>1</sub>*). The drone footage depicts that the terrain of the area has been significantly altered with excavation and levelling of up to 30 meters in width, and vegetation/trees within it have been cleared and removed. On-site, uprooted trees and those with exposed roots have been observed. It should also be noted that the excavator and conveyance used for the extraction activities of Mr. Raci were found in the same area (*See Figure A-6*).
  - b. The removal/clearing of vegetation and trees is also prominent on the banks adjacent to the southern portion of Mr. Raci's permitted area, located to the west, at WGS 1984 geographic coordinates 13° 25' 25.86" N and 120° 24' 35.73" E (*Refer to Figures B-2 and B-3-B-B<sub>1</sub>*).
  - c. Both images indicate that the stretch of Gayamat River is a braided river system which is characterized by presence of numerous island bars, or elevated regions of accumulated river sediments, within the channel. These island bars have been consolidated/compacted/hardened over time and now support lush vegetation. Additionally, it can be observed that several inactive channels, previously filled with sand and gravel deposits, now have relatively same elevations as their surroundings. These serve as



pathways for vehicles and equipment as seen in the latest drone images.

6. An interview with the operators of the activity and Mr. Raci confirmed that they were extracting aggregates from the area specified in Item 5-a, and the adjacent segment of Gayamat River. They admitted to being unaware that the site was already outside the allowed CSAG extraction permit boundary of Mr. Raci, as there were also no boundary markers installed in the area. The operators further mentioned that they were specifically extracting boulder-sized deposits during their quarrying activities at the site.
7. As previously mentioned, conducted site inspections and review of the demarcated protected area boundary by the PAMO revealed that areas being quarried are already within the boundaries of MCWS. (*Refer to attached Locations Maps*)

Mt. Calavite Wildlife Sanctuary, initially declared as game refuge and bird sanctuary, was later proclaimed a Protected Area under the category of *Wildlife Sanctuary* by Presidential Proclamation No. 292 on April 23, 2000. This was legislated under Republic Act No. 11038, also known as the "*Expanded National Integrated Protected Areas System Act of 2018*". The technical description of the PA's boundaries has already been established, having a total land area of 18,172.69 hectares.

## **COMMENTS AND RECOMMENDATIONS**

In view of the foregoing findings, hereunder are the comments and recommendations of the undersigned:

1. Sand and gravel extraction activities of operators under Mr. Raci's CSAG permit **extended beyond the delineated and approved permit area**. This is evident by clear indications of extraction/removal of aggregates outside the allowed boundary, presence of equipment used situated several meters away from the permitted extraction site, along with visible tracks on the ground. In addition, quarry operators also acknowledged that they unknowingly extracted aggregates outside the CSAG permit area.

Such activities are deemed illegal and in violation of the pertinent provisions of the Republic Act No. 7942, the "Philippine Mining Act of 1995", and its revised implementing Rules and Regulations under DAO 2010-21:

### Section 103 of RA 7942:

Theft of Minerals – Any person extracting minerals and disposing the same without a mining agreement, lease, permit, license, or steals minerals or ores or the products thereof from mines or mills or processing plants shall, upon conviction, be imprisoned from six (6) months to six (6) years or pay a



fine from Ten thousand pesos (P10,000) to Twenty thousand pesos (P20,000), or both, at the discretion of the appropriate court.

Section 79.b of DAO 2010-21:

The extraction, removal and/or disposition of materials under the Permit shall be **confined within the area specified** therein, the boundaries of which, according to the application, are established on the ground with prominent marks

As such, Mr. Raci is hereby ordered to immediately **Cease and Desist** from further conducting the illegal extraction activities.

Further, the CSAG Permit of Mr. Raci may be canceled/revoked/terminated, after due process, by the Provincial Governor concerned based on the grounds provided in Section 100, items a and b, of DAO 2010-21:

- a. Failure to comply with the terms and conditions of the Permit and ECC, if applicable;
  - b. Violation of any provision of the Act and these implementing rules and regulations
2. Considering that the CSAG permit site falls within the MCWS protected area boundary, it is recommended that review and reevaluation of the quarry application and necessary documents be conducted, as Section 15.a.2 of DAO 2010-21 states that:
- “Old growth or virgin forest, proclaimed watershed forest reserves, wilderness areas, mangrove forests, mossy forests, national parks, provincial/municipal forests, tree 15 parks, greenbelts, game refuge, bird sanctuaries and areas proclaimed as marine reserves/marine parks and tourist zones as defined by law and **identified initial components of the National Integrated Protected Areas System (NIPAS)** pursuant to R.A. No. 7586 and such areas expressly prohibited thereunder, as well as under Department Administrative Order No. 25, Series of 1992, and other laws” are **closed to mining applications**.
3. To emphasize, Gayamat River's relatively narrow channel makes it a crucial site for bank erosion, which can be further accelerated by extracting too close to the banks, intentional removal of aggregates along said banks, and clearing of vegetation. It is important to note that vegetation in critical bank slopes plays a crucial role in stabilizing the river banks and preventing erosion as it anchors soil and rocks in place and reduces impacts of flooding.
  4. It is advised to closely monitor illegal extraction activities in Gayamat River and its vicinity, as well as any other activities that may have negative impacts and cause significant changes to the river's morphology. This is to



prevent any adverse effects to the environment, nearby communities, and properties.

For the PMRB's information, consideration, and appropriate action.

  
**JEBIELA CARLA PETALCORIN**  
Science Research Specialist II

cc: **The Regional Director**  
Mines and Geosciences Bureau MIMAROPA Region

**The ENR Officer**  
Provincial Government – Environment and Natural Resources Office  
Capitol, Mamburao, Occidental Mindoro



## PHOTO DOCUMENTATION



**Figure A-1.** Dry riverbed within the main channel of Gayamat, heavily silted with cobble to boulder-sized deposits



**Figure A-2.** Indications of sand and gravel extraction within the river. Some aggregates were dumped/piled-up along the edges of the riverbed





**Figure A-3.** Crawler excavator and dump truck observed upstream of the river, about 540 meters outside the permit area of Mr. Raci.



**Figure A-4.** Visible tracks of equipment and conveyances leading towards the upstream segment of Gayamat River.



**Figure A-5.** Indications of ongoing riverbank erosion along some sections of Gayamat River. Its relatively narrow channel makes it a crucial site for bank erosion.





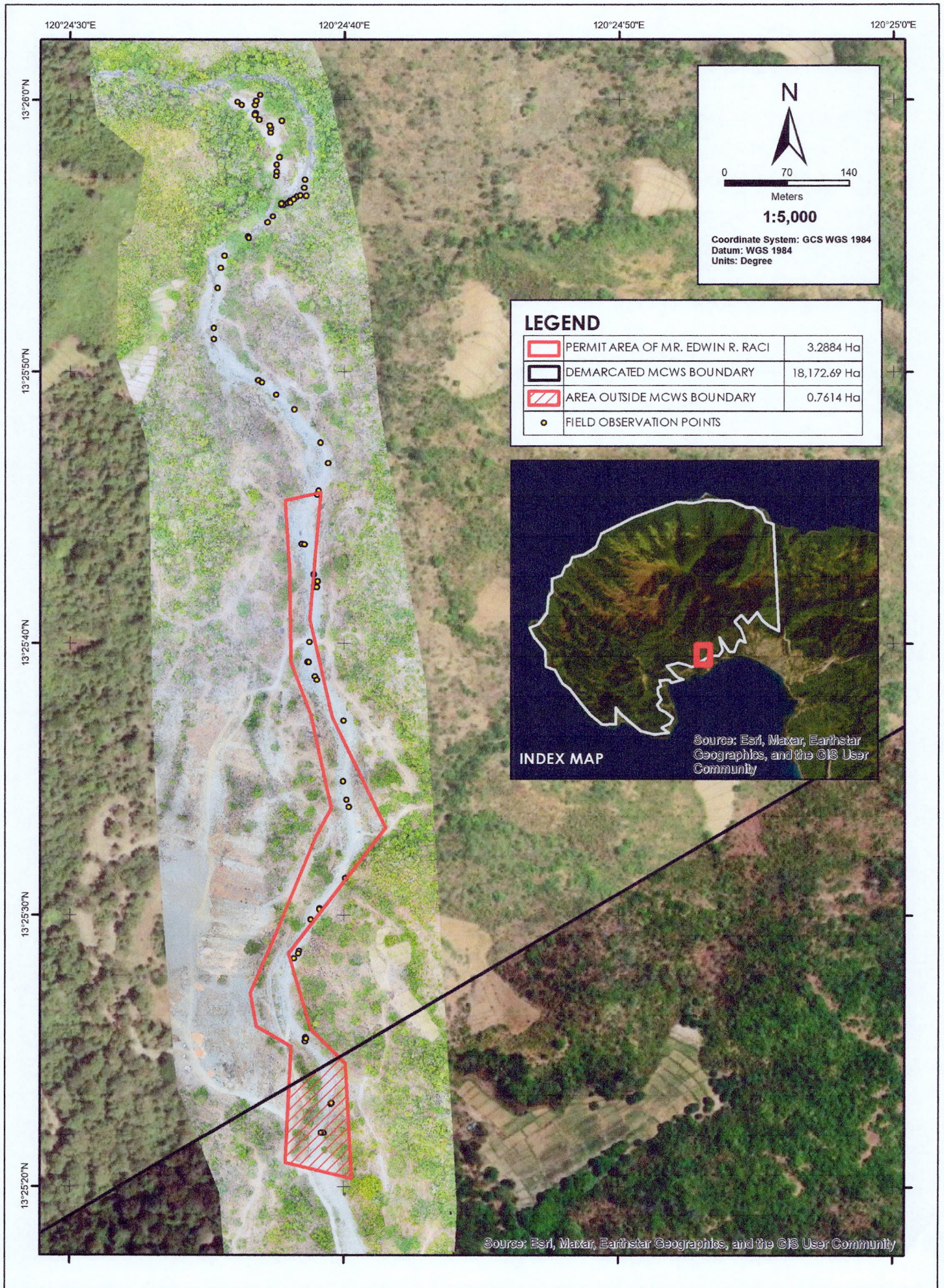
**Figure A-5.** Indications of ongoing riverbank erosion along some sections of Gayamat River. Its relatively narrow channel makes it a crucial site for bank erosion.



**Figure A-6.** Drone image showing conspicuous tracks left by equipment and vehicle on the ground surface, which lead towards the upstream section of Gayamat River.

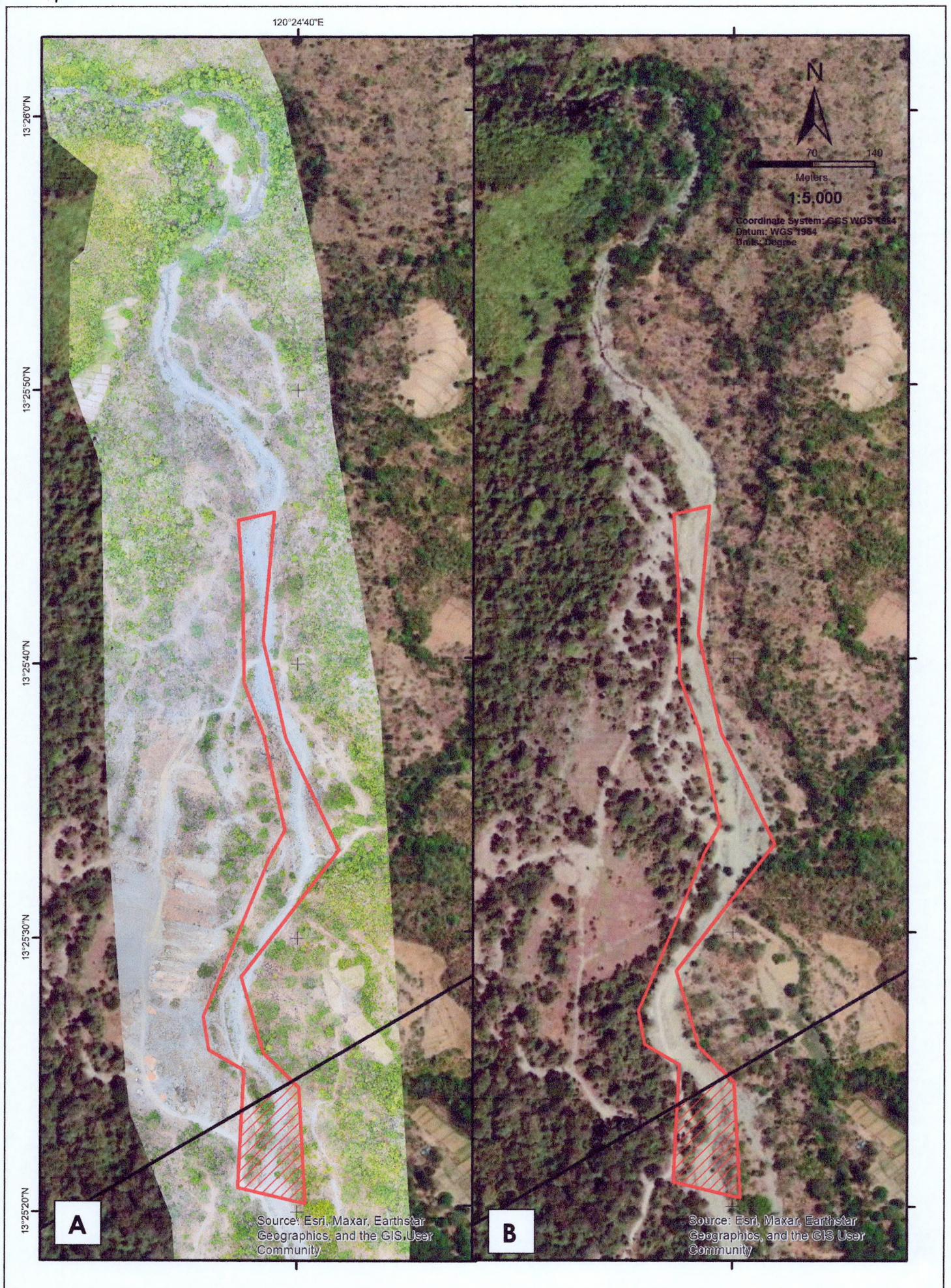


# LOCATION MAPS



**Figure B-1.** Map showing the permitted area of Mr. Raci along Gayamat River, situated within the demarcated MCWS protected area boundary.





**Figure B-2.** Comparison between the (A) processed drone image and (B) satellite image from Google Earth (2018)





**Figure B-3.** Comparison between (A-B) processed drone images and (A<sub>1</sub>-B<sub>1</sub>) satellite images from Google Earth (2018)