INTERNATIONAL JOURNAL FOR INNOVATIVE RESEARCH IN MULTIDISCIPLINARY FIELD ISSN: 2455-0620 Volume - 6, Issue - 10, Oct – 2020
Monthly, Peer-Reviewed, Refereed, Indexed Journal with IC Value: 86.87 Impact Factor: 6.719
Received Date: 11/10/2020 Acceptance Date: 25/10/2020 Publication Date: 31/10/2020

SUSTAINABLE CONSERVATION OF ROCK MONUMENTS AND FORT REMAINS OF ANCIENT KANDRA DYNASTY, GRANITIC GADIA MOUNTAIN, KANKER, C.G. INDIA.

[1]Dr. H.D. DIWAN, [2]Dr. S.S. BHADAURIA, [3]Dr. PRAVEEN KADWE

[1]Alumni, Dept. of Applied Geology, Dept. of Civil Engineering, NIT, Raipur, C.G.
[2]Head, Dept of Geology, Govt. NPG College of Science, Raipur, C.G.
[3]Head, Dept. of Defence Studies, Govt. NPG College of Science, Raipur, C.G.

Abstract: *The ancient Kandra Dynasty was ruled the Kanker State of North Bastar region during 14th Century AD, established by Dharam Dev, a Hindu Tribal Leaderof Dandakaranya Forest. He built his capital, palaces, rock Fort, reservoirs etc. on one of the Twin mountain hillocks lies on the southern fringes of Kanker town. It has been named as Gadia mountain or Kila Dongari,situated on right bank of Dudh Nadi, a tributary of River Mahanadi or Chitrotpala Ganga. The study reveals that fortification were carried out in the 2nd Geomorphic Zone of hill i.e. The upper Flat Top levels, (560-580 m,AMSL), spread over about 12 Acres. Following the Circular Shape of mountain Circumferences. The remains of Fort, palace buildings, rock stone walls have been scattered above the "Singh Dwar" a Stone Gateway. The preserved Door of the Fort "Singh Dwar" is situated on the sloping face of the 2st level with lintel and some architectural design of Medieval carvings. Inside the ruined premises, the construction material rock stones / blocks, briquette mantle, bricks found as debris mounds and lineaged with the room walls and buildings structures. The natural caves were utilized as assembly hall for meeting and alert the soldiers and security, also arsenals and weapons were kept in Garrisons. The Kings religious monuments of Shiva Temple and YogmayaShitla Temple exists on the top levels nearby the Sonai - Rupai Natural lakes.The preservation of monuments, Caves, Fort remains, Archaeological cultural, heritages are necessary to protect the ancient historical assets of the region.*

Key Words: *Kandra Dynasty, kanker, Gadia Mountain, granite hill fort, Hindu tribal king, ancient monuments, geomorphic level, caves, natural lakes.*

1. INTRODUCTION: -

The Ancient Kanker State had been considered as entry state for the Dandakaranya or Bastar region. It was also Known as the Land of Hindu monks Kank, Lomash, Shringi, Angira were Lived at Sihawa and made their Asharms. The state has been mentioned in Hindu Epics Ramayana. The ancient Kingdoms Maurya's, Vakatak, Nal, Nag, Chalukya, Kulchuris were ruled up to 1100 AD. The King Gaya Karna Kept the foundation of som Dynasty in 1125 AD and continued upto 1344 AD of Chandra Sen reign. After the downfall of SomDynasty in 1345 i.e. 14th Century AD, the Kandra Dynasty was established by Hindu Tribe Leader Dharmadev of Hilly Forest tract. Firstly, he kept & Captured the origin of Mahanadi site Sihawa mountain and built a Fort, but he lost this place by attack made by Bastar ruler King Anang Dev. Then afterwards he moved towards Kanker state. During 14th Century the Kulchuris region were in weak position and Forest Tribes leaders Chieftains independently hold the small kingdoms. Likewise, Rajgond in Tripuri &Garhmandla region, in Sihawa-Kanker hilly tract the Kandra tribes captured the region & they had ruled over the Forested region & capable of armed soldiers / amour strength and worriers for battlement during invaders attack. After establishment of a capital Town & Fort on Gadia Mountain Kanker,the king Dharmadev recapture the Sihawa within 2 years. He made expansion of cultural heritage of Forest community. In this study the physical characteristics of the terrain of Gadia mountain has been interpreted and correlated with the ancient fortification, structural remains and archaeological importance. The Kandra Dynasty ruled about 40 Years and Mountain was the capital of Kankeruntil the Chandra Dynasty entered Kanker.

2. METHODOLOGY: -

Under methodology, the Survey of India toposheets have been utilized as base map of the study area, to locate the place and physical characteristics like slope altitude etc. of the hillocks and other features. The remote sensing imagery interpretation have been carried out to demarcate different geomorphic zones, their characteristics with respect to stability and soundness of the constructed structures in the ancient past.Various literatures has been consulted and cited acknowledged properly. The field checks and ground truth have been made at selected sites with respect to stability and soundness of the constructed structures. and configuration.

PHYSIOGRAPHY, CLIMATE RAINFALL & DRAINAGES: - The general topography of the region exhibits a rugged terrain with undulating deep valleys. The average landscape shows elevation of 400 m AMSL. and at Katewa Dongari the max. height 660 m AMSL. The isolated small hills are arranged in alphabetic M style and lies between 2 to 6 Km in length. Small waterfalls at Dudh Nadi and Mahanadi present. The general ground surface represents the peneplanation due to action of weathering of physical and chemical process. The hard and compact rocks granites and basic dykes occurs in form of hilly mounds and ridges mostly oriented in N.S. Trend. The Kila Dongari and Bagar Dongari are two main Plateaued hills witnessing the extreme peneplanation. The Kila Dongari has an area of 3 KM2 whereas the Bagar Dongari is 6 KM2 and highest elevated place. The Kila Dongari Shows radial drainage pattern and the streams have low gradient towards east. DudhNadi Flows in the area with a trend of NE-SW direction and joins Mahanadi on NE portion. The boulders, rock debris and sands filled up these valleys and abstractly the water flows generate the island bars and sandbars. The forest vegetation shows mixed variety of forest species Sal, Teak, Mahua, Arjuna, Seasametc. under protected forest.

ROCK TYPES, LITHOLOGY AND SUCCESSION: - The area is occupied by hard and compact igneous granitic rocks. The grey granites are prominent in the region which is massive in nature. The granites are leucocratic coarse to medium grained, dark colour mineral is mostly biotite and iron oxide. Geologically, the granites are belonging to Bengpal rocks, which are unconformable overlain by Chandrapur sandstone, Arko sic in nature, medium to coarse grained consisting sub rounded grain of quartz feldspar and mica flakes. Basal part of this sandstone is conglomeratic. Alluvium and soils found in the plain areas and low-lying river channels and streams. The top of mountaineous region of granitic rocks are capped with thin layer of Chandrapur sandstone as outliers at some places. The plains are covered with weathered soils and alluviums. The granitic rocks are exposed as rounded elongated, elliptical, boulders throughout the area. The outcrops as hills, rocky knobs, weathered blocks, rounded boulder exposures mostly extended in N-S direction towards eastern part of the area. The structural features prominently shows two directions. 1. Fault along the river tract E-W-followed by Chinar river course 2. NW-SE forms the acute angle with N-S-Fault.

GEOMORPHIC CONFIGURATION OF GADIA HILLS: - The erosional features in isolated hills of resistant rocks have been structurally controlled by tectonic movements. The presence of mega lineament, joints, fractures, faults zones affected the Gadia hill severally in geologic past. The evolution of caves and cavities, slickensides plain boulders were developed due to geotectonic activities prevailed in the mountain's region. The Gadia mountain hill represents a Twin hillock, the western hill had been utilized as capital of ruler. It is nearly round in shape, the intervening low level separates the eastern hill which is elongated in N-S direction and lower in height than Gadia hill. The two flat levels exists in the Gadia mountain, found suitable for construction of structures. Various construction works had been carried out by the rulers considering the geomorphic conditions of hills and slopes. Stability and firm foundations on planar surface at plateau flat levels of 560 m preferred towards NW Part, whereas at higher elevation of top the SE level grounds were provide planar surface for construction.

FORTIFICATION AND PRECINCTS: -The Kandra Dynasty ruler King Dharmadev had selected the Gadia mountain for capital of Kanker state in 14th Century (1345AD). The dimension of precincts around 1.25 Km with an aerial extension of about 12 Acres. It was constructed at the NW of the Singh Dwar with major NW-SE oriented axis. Towards SE at hill Top forest & cave regions other monument temple, religious structures had been constructed. The top level of hill reaches to 601 m. AMSL elevation and natural lake SonaiRupai exists on 580 on AMSL. The granitic rock boulders have been sculptured the ground surface.The study reveals that the existing Singh Dwar of Fort lies in the NW part of Gadia mountain hills. It shows the 2nd Level of flattened region of slopes of hills. The ruins of Buildings, Plinth, broken walls, briquettes bricks 1.2 to 2 m height walls, sanctum, storage, place of audience, treasury route etc. spread over half of the precincts i.e. 5-6 Acre lands. The public amenities water reservoir, caves of Assembly Hall, open theater grounds, and hoist point of flag etc. mentioned in the literature also can be located in the field site but due to high anthropogenic activities and modernization of hill route roads / blasting of rock boulders, reclamation of passages etc. demolishes many historical Point and their originality has lost in few decades. It needs detailed investigation prior to further deterioration of natural landscapes.

KANDRA DYNASTY- RULERS AND HISTORY- During the 14th Century the Kulchuris region of Tripuri and Ratanpur had been weak and losing administration in forest hilly tracts. The contemporary forest leaders & fighter Tribes had become independent state in their territory and ruled the state. The Kandra Dynasty was established by a Hindu Tribal leader Dharam Dev in 1345 AD. He built forts at Sihawa & Kanker. He also utilized the fort for judicial purpose and punished to civilian and criminals. agitator against the rulers. A separate judicial system wing had been developed. The quick and high charges of penalties made on severe and wrongful acts. King Dharma Dev ruled about 22 years. He never misuses the wealth of the state and there was a treasury of Kingdom at the fort. His administration was very high

efficiency and effective and easily available reliefs to common people. He successfully administered 22 years over the state without any hurdle or oppose. It was the classical ages of administration over the Kanker state. He followed the Mauryan administration Policy with public beneficiaries and sovereginity. He preferred the establishment of administration and fortification at hill mountain forested region. Since he belongs to Hindu Tribe clan, he was constructed many Shiva Temple, Shakti Sthala in mountain and other holy places. Some of monuments and sculptures were found at hill top and other places,needs further investigations and correlations. Instead of luxurious amenities in plains of Kanker town he Selected the rigorous and tough livings on mountain region perhaps due to sound strategic position and supreme defense against invaders / attackers.

3. DISCUSSION AND CONCLUSION: -

The Kanker region has always been an independent state in Indian history. The Granite hilly tract of Archaean rocks occupied in most part of the area. The nearby Holy place Sihawa had been considered as political center of the region. During 14th Century the reign period between Som Dynasty and Chandra Dynasty, the Kandra King Dharam Dev hold the Kanker state and constructed capital & fort on Gadia mountain. The ancient ruler utilized the natural caves and tunnels of rocks for their treasury and wealth. The fortification was made considering the landscape and geomorphic levels of Granite mountain and preferred stable planer surface at plateau flat zone of 560 m AMSL Further detailed investigation is necessary to establish the chronological sequence of monuments and Archeological remains of the fort. Conservation and protection are required through public awareness, NGO's and other local govt agencies to preserve the historical heritage of region.

TABLE-I
GEOLOGICAL SUCCESSION AROUND KANKER (GENERALIZED)

AGE	LITHOLOGY	
Recent	Alluvium and Soil Mantle	
Protereozoic	Chhattisgarh Super Group	Chandrapur sand stone Quartzitic Siliceous S/St Merges in to Conglomerate basal Formations
Unconformity		
Archaean's	Bengpal	Quartz Veins Granite Pink Granite Grey Gneisses

TABLE-II
KANDRA DYNASTY, KANKER

S.No.	Ruler/King	Period	Years
I.	Dharam Dev (Dharman)	1345 – 1367 AD	22 Years
II.	Chhattar Dev	1367 – 1385 AD	18 Years

N.B. – The King Veer Kanhar Dev of Chandra Dynasty Came to Sihawa from Jaganath Puri for Healing the Health. He ruled Kanker after Kandra Dynasty. (1385- 1404 AD)

TABLE -III
GEOMORPHIC ZONES, SURFACE LEVELS OF GADIA MOUNTAIN AND GROUND FEATURE/STRUCTURES OF ARCHAEOLOGICAL IMPORTANCE.

S.No.	Geomorphic Surface Zones and levels	Range of Altitude (in mts)	Structure of Archaeological Importance	Ground Features
1.	Hill Top	580 – 601m	Monument Reservoir Rocky Cave Jogi Cave	Monument Temple, Lake, Caves, Rocky Boulders
2.	Hills Upper Plain Table Land	560-580 m	Remains of Fort, Rocky Cave ChuriPagar Boulders	Kila, Fort, Remains of House, Building, Caves Ruined War room
3.	Hills Upper Slope Land	520 – 560 m	Monument Forested Shiva Cave	Forested mixed jungle, Rear gate

4.	Hills Lower Flat Plains	500 – 520 m	Monuments Small mounds Forested	Forested Vegetation Cover, Small mounds on Eastern side
5.	Hills Lower Slopes	440 – 500 m	Forested	Slopes widen on western Flank of mountain
6.	Undulating Plains and Ground level	Below 440 m – above 410 m	Ponds Tanks Settlement	Settlement Agricultural Lands, thick soil mantle

N.B. – The Upper Erosion Surface of Top-level is 580 m AMSL.

TABLE -IV
HILL FORT REMAINS AND MONUMENTS OF KANDRA DYNASTY, GADIA HILLS/KILA DONGARI, KANKER, C.G.

S.No.	Rock Monument/Fort Remains	Description
1	Lord Shiva Temple and Monuments	Open Rectangular Dice 20’ x 10’ Shrines and stone historical engravings, western side of Hill Top Elevation 580 m AMSL
2	YogmayaShitla Temple/Durga Temple (New)	Located at Peripheries of Reservoir / Pond / Lake
3	Jogi Cave, ChuriPagar, Cave Shiva Cave	At a Linear Fashion of right eastern side of slope Margin between scattered boulders of Granites, Structurally Controlled
4	Sonai-Rupai Water Ponds Lake Reservoir	Extending E-W Direction, Permanent Source of Water at Hill Top, Perched G.W Feeded the Lake Water, Natural Spring
5	SinghamDwar of Fort	On the Western Flank of the Table Land (Level II) The Stairs and Small side Walls with Lintel and Column Stone of Door (Darwaja Inscribed)
6	Briquitte He Stone of Old Palace, Treasury, Ruins of Buildings, Arsenals etc. 2 to 3 Feet Walls	Towards South Eastern faces of 2nd Level, Plinth, rock boulders, size 12’ x 20’ thick stone walls Building room Trimmed stones.
7	Lower Ponds, Reservoirs	Constructed by the ruler to supply water for civilians and agricultural Fields at low plains.

TABLE – V
INSCRIPTIONS OF KANKER STATE (ANCIENT NAME KANKAN)
(ARCHAEOLOGICAL EVIDENCES)

S.No.	Location	Historical Ages	No. of Quantity	Description
I.	Sihawa Hill	1182 AD	01	Describes Somvanshi Kings ruled in Kanker
II.	Rajim – Mahanadi River – Bank	1144 AD	01	Kanker as Karad Kingdom of Kulchuris, Prithvi Dev ruled Ratanpur, His Commander Jagatpal Victoried battle
III.	Kanker City	1166 AD 1186 AD	02	Copper Plates / Letter Somvanshi Raja Pampa Raja,Bhupdev.
IV.	Diwan Talab Temple Kanker (Mudpara)	1320AD	01	Remanants of Temple exist, seven generations of kings and Diwan described, King Bhanu deva of Kankaria
V.	Tanka Para,Kanker City	1213 AD 1214 AD	02	Describes Som Dynasty King Karna Raj,Jait Raj.

INTERNATIONAL JOURNAL FOR INNOVATIVE RESEARCH IN MULTIDISCIPLINARY FIELD ISSN: 2455-0620 Volume - 6, Issue - 10, Oct – 2020
Monthly, Peer-Reviewed, Refereed, Indexed Journal with IC Value: 86.87 Impact Factor: 6.719
Received Date: 11/10/2020 Acceptance Date: 25/10/2020 Publication Date: 31/10/2020

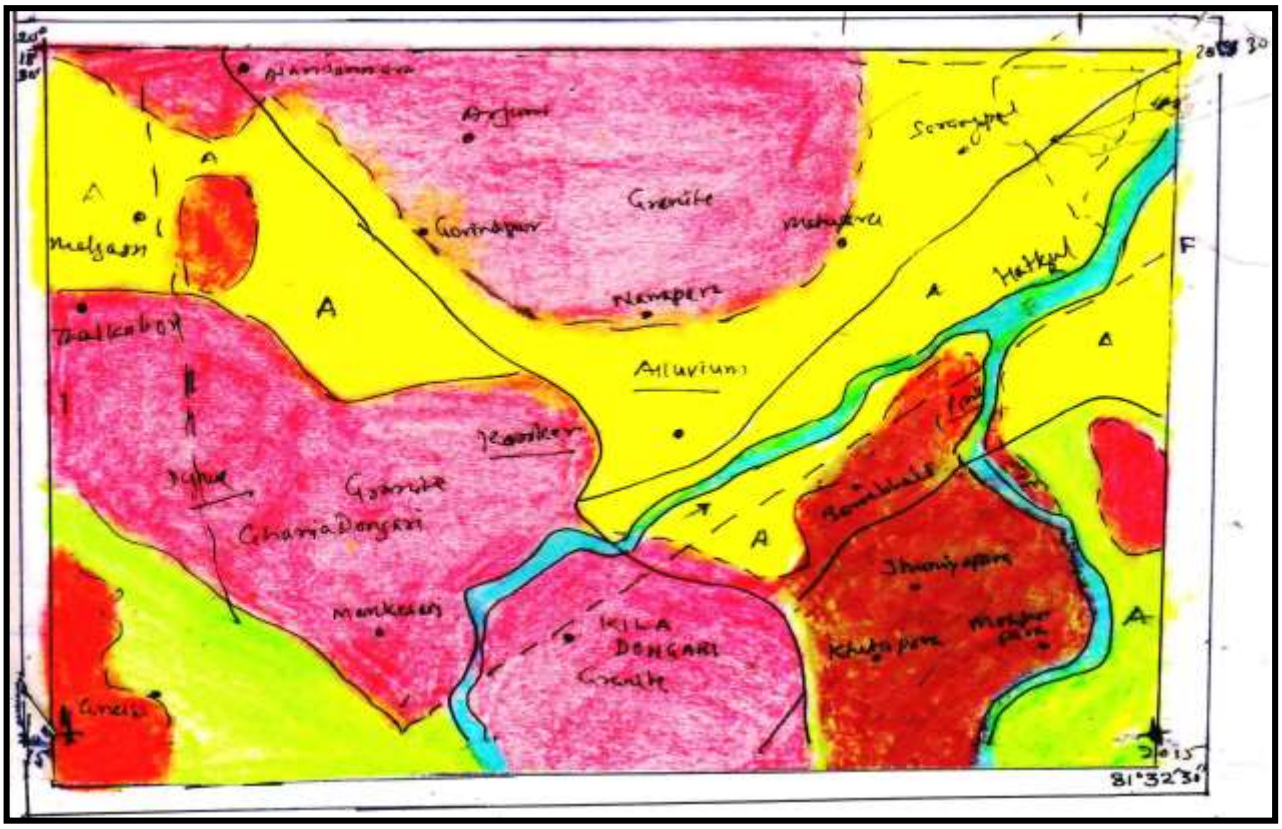

FIG- I GRANITIC HILLS & EXPOSURES (KANKER)

FIG – II GROUND ELEVATION ISOPLETH GADIA HILL

INTERNATIONAL JOURNAL FOR INNOVATIVE RESEARCH IN MULTIDISCIPLINARY FIELD ISSN: 2455-0620 Volume - 6, Issue - 10, Oct – 2020
Monthly, Peer-Reviewed, Refereed, Indexed Journal with IC Value: 86.87 Impact Factor: 6.719
Received Date: 11/10/2020 Acceptance Date: 25/10/2020 Publication Date: 31/10/2020

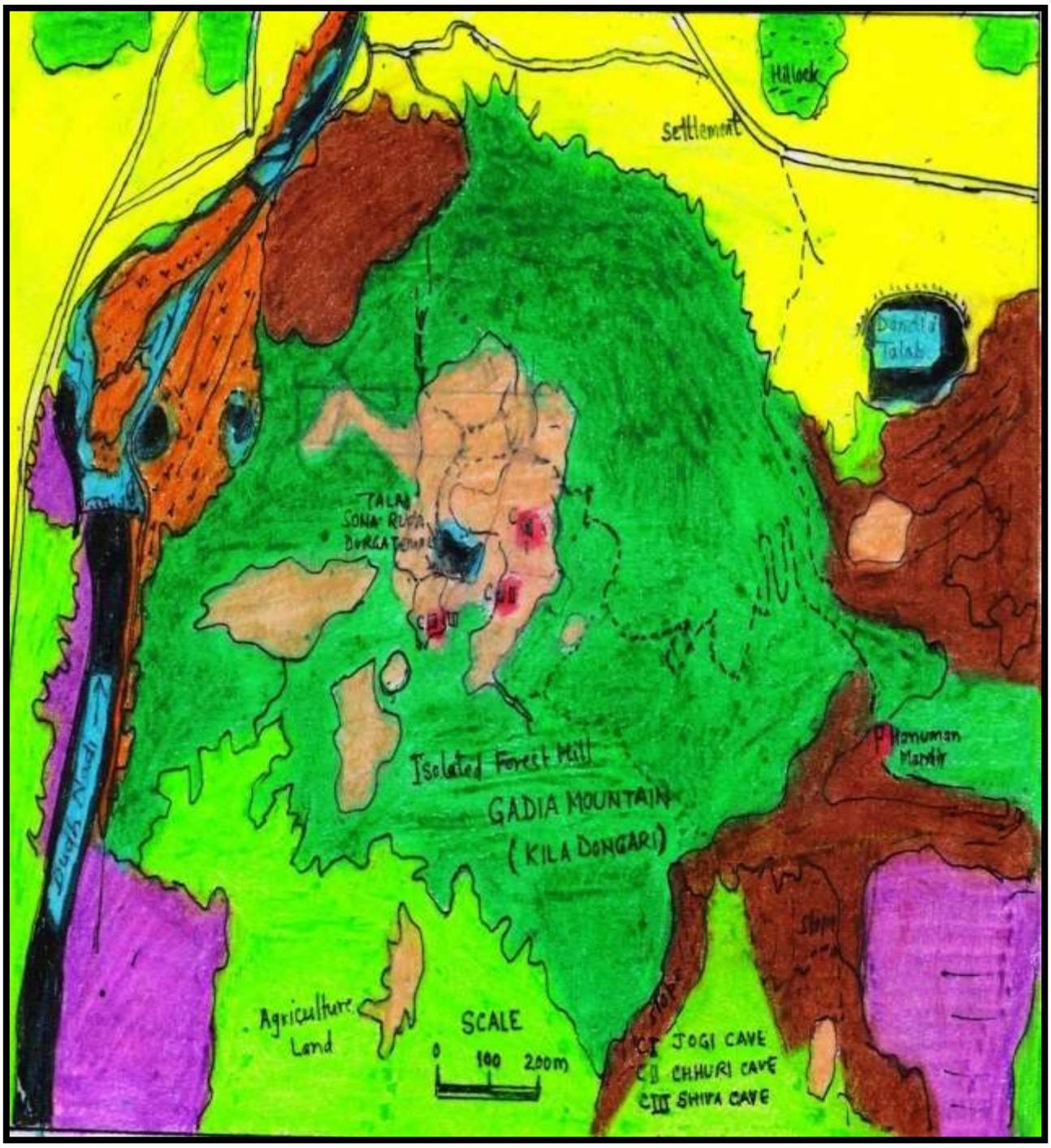

FIG – III GEOMORPHIC MAP OF GADIA MOUNTAIN (BASED ON SATELLITE IMAGERY, © DR. H.D. DIWAN, 2020)

INTERNATIONAL JOURNAL FOR INNOVATIVE RESEARCH IN MULTIDISCIPLINARY FIELD ISSN: 2455-0620 Volume - 6, Issue - 10, Oct – 2020
Monthly, Peer-Reviewed, Refereed, Indexed Journal with IC Value: 86.87 Impact Factor: 6.719
Received Date: 11/10/2020 Acceptance Date: 25/10/2020 Publication Date: 31/10/2020

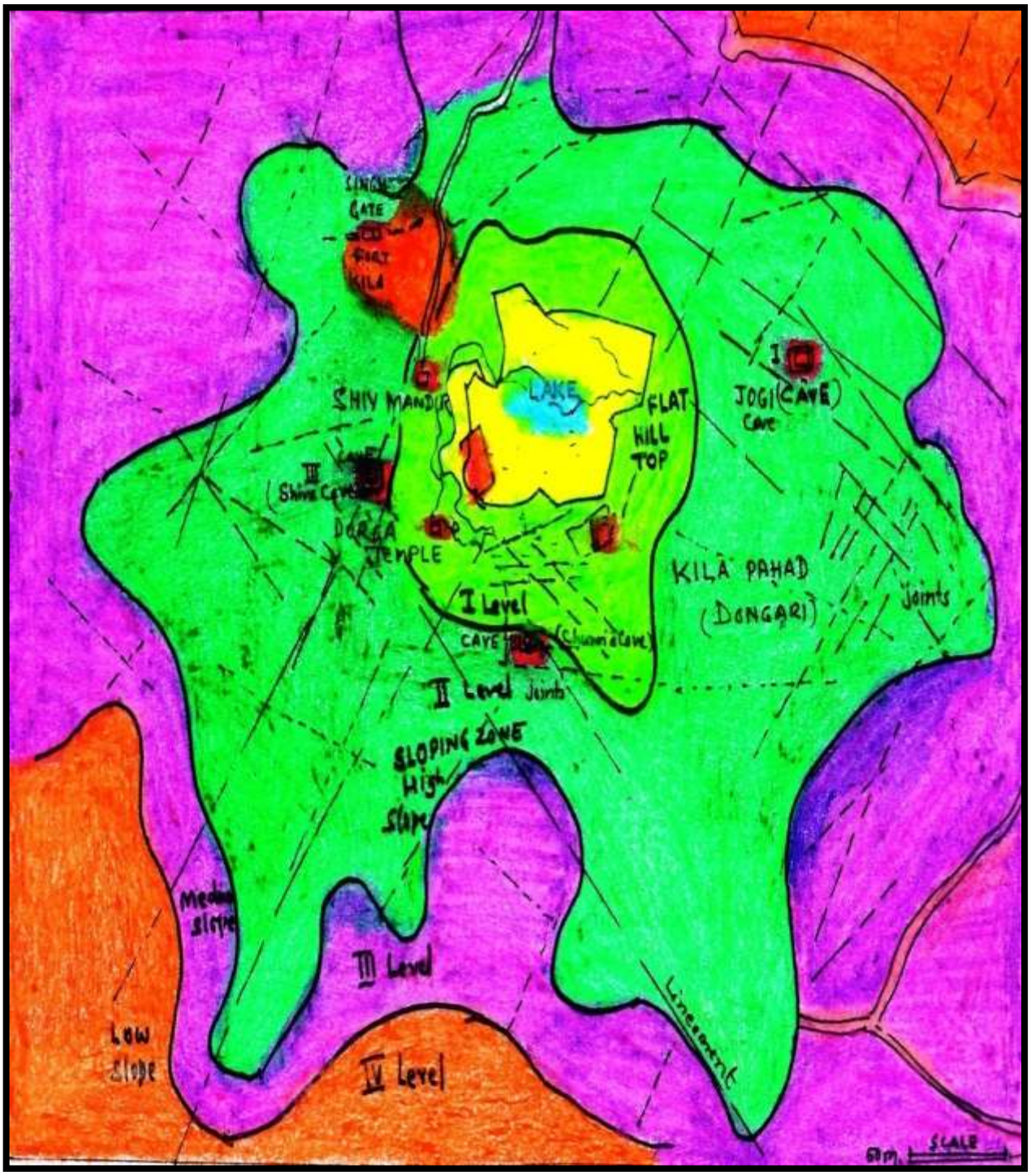

FIG – IV GEOMORPHIC LEVELS OF GADIA MOUNTAIN
(Natural Lake at Hill Top Level)

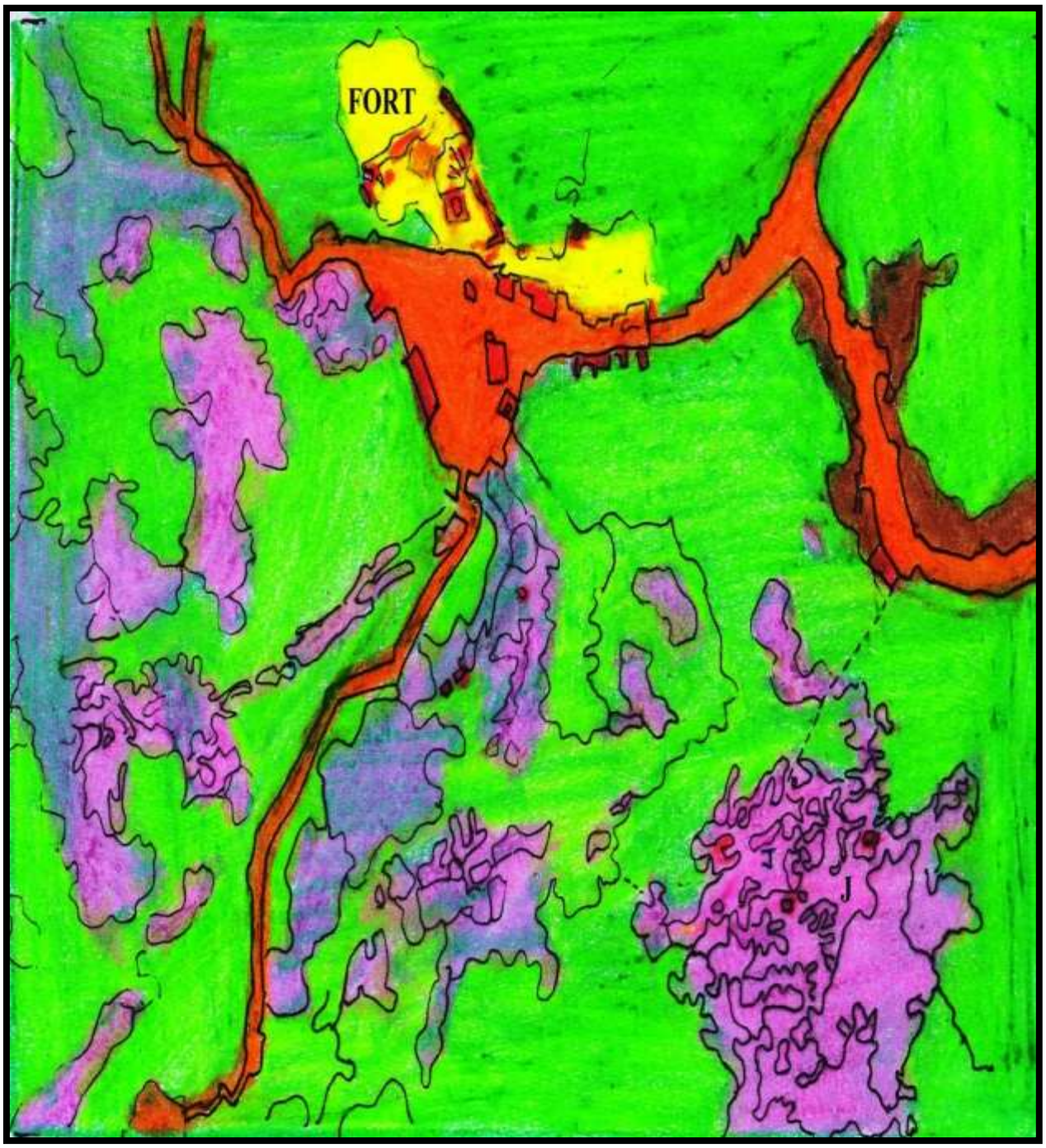

FIG – V KANDRA FORT REMAINS & CAVE, (J) (GADIA MOUNTAIN KANKER)

INTERNATIONAL JOURNAL FOR INNOVATIVE RESEARCH IN MULTIDISCIPLINARY FIELD ISSN: 2455-0620 Volume - 6, Issue - 10, Oct – 2020
Monthly, Peer-Reviewed, Refereed, Indexed Journal with IC Value: 86.87 Impact Factor: 6.719
Received Date: 11/10/2020 Acceptance Date: 25/10/2020 Publication Date: 31/10/2020

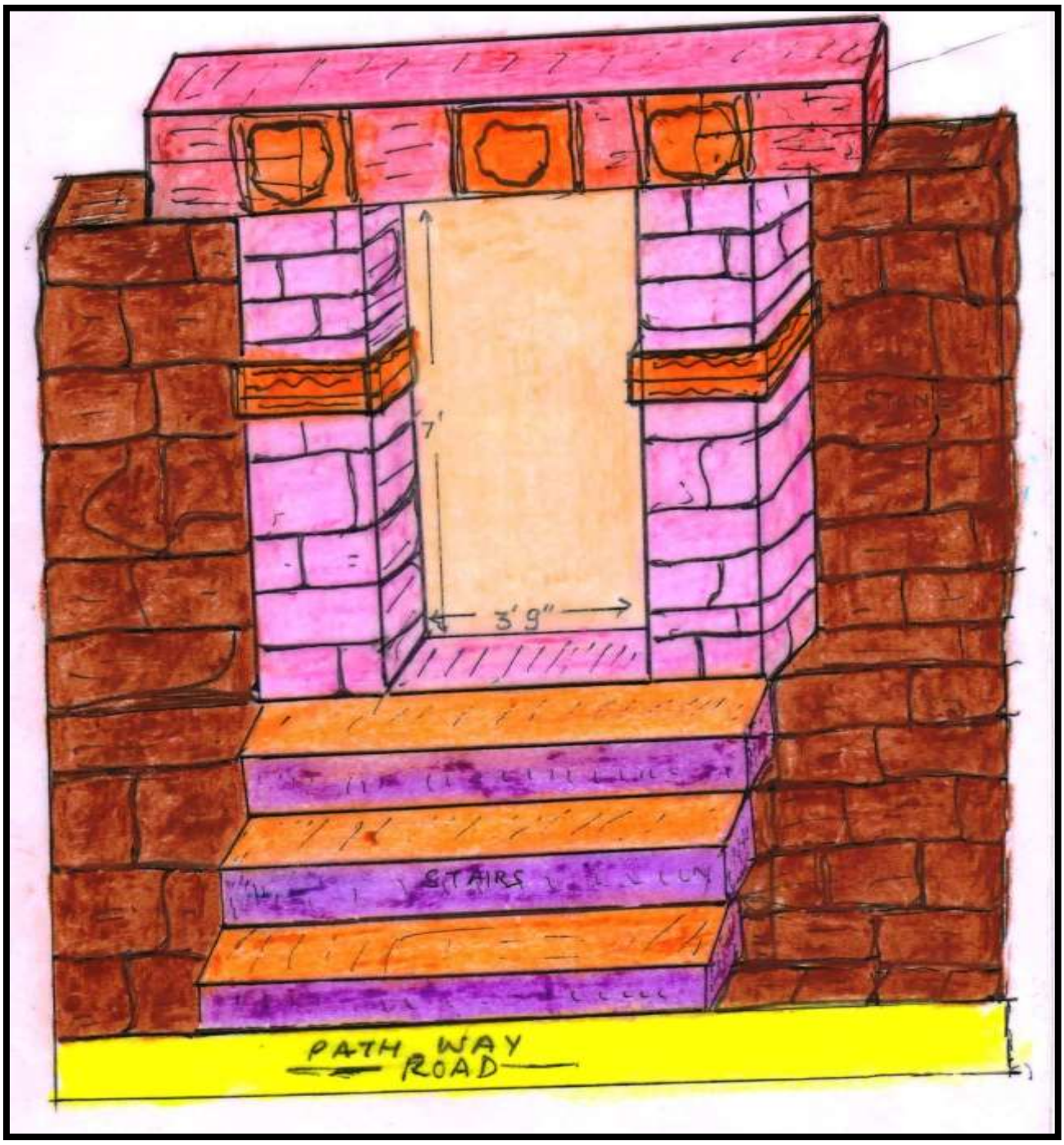

FIG – VI SINGH DWAR "GATEWAY OF KANDRA FORT GADIA MOUNTAIN – 1345 AD (King Dharam Dev)

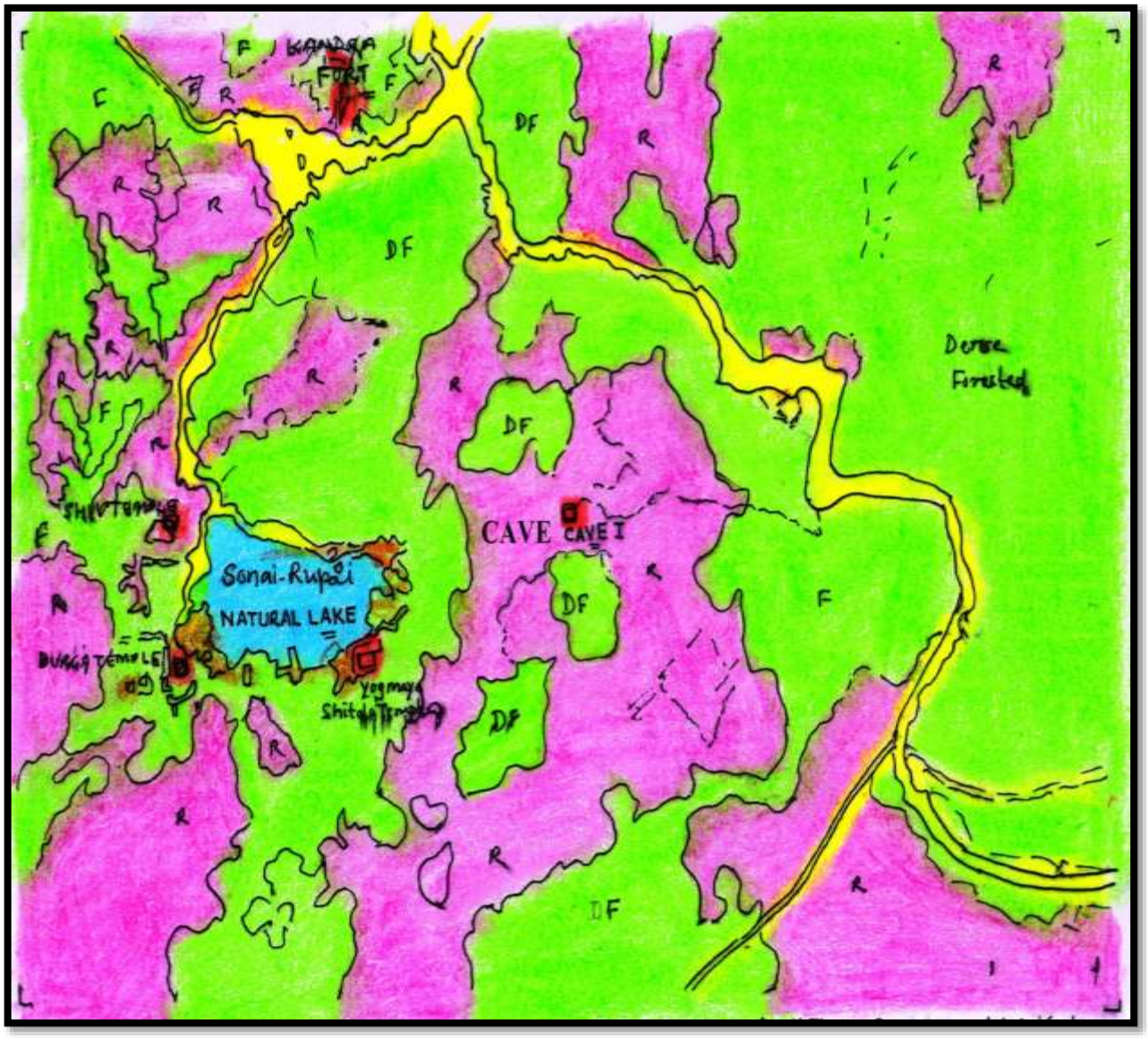

FIG – VII GADIA MOUNTAIN – KANDRA FORT, SONAI – RUPAI LAKE, MONUMENT, TEMPLE, CAVE, GRANITE ROCK (R) FOREST (DF/F)

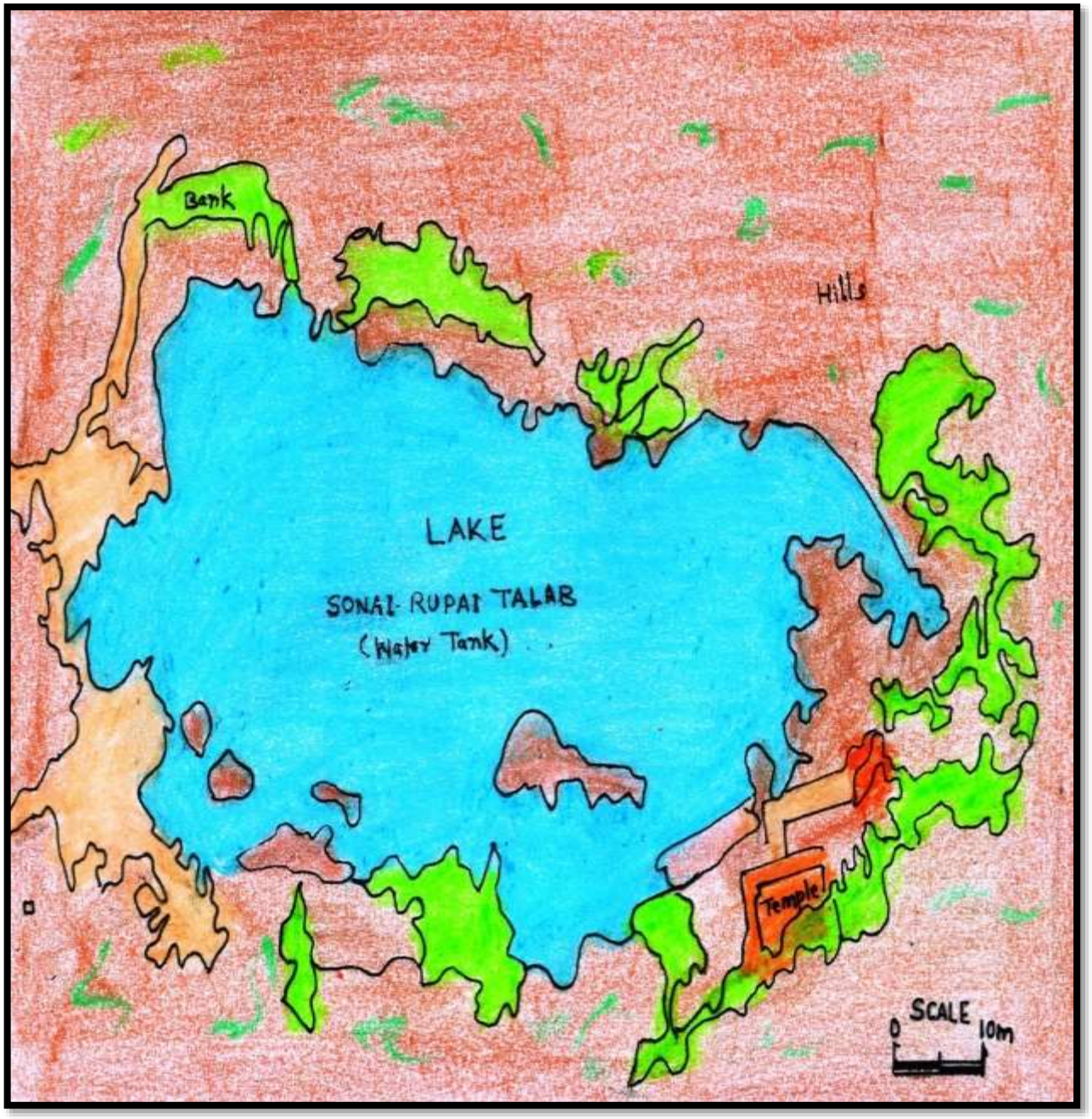

FIG – VIII KILA DONGARI (GADIA MOUNTAIN) NATURAL LAKE (Hill Top Level, I)

REFERENCES:

1. Crook shank, H. (1963), Geology of Southern Bastar and Jeypore from the Bailadila Range to Eastern Ghats, Mem. Geol. Surv. India 87:150
2. Ramachandra HM, Roy A Mishra VP, Dutta NK (2001) A Critical review of Tectonothermal evolution of the Bastar craton, Geol. surv. India spec. Publ. 55; 161-180.
3. Ramakrishnan M (1990), Crustal Development in Southern Bastar Central Indian Craton, Geol. surv. India Spl. Pub. 28: 44-66.
4. Wikipedia http://website Kanker,2019.
5. Google, Satellite Imagery Scene 2020.