

## **PUBLIC WORKS DEPARTMENT**

### **3.2 Deficiencies in the operation of sand quarries**

#### **3.2.1 Introduction**

Based on the recommendations of the High Level Committee<sup>58</sup>, Government of Tamil Nadu (GoTN) amended (October 2003)<sup>59</sup> the Tamil Nadu Minor Mineral Concession Rules, 1959 (TNMMCR) with the stipulation that the quarrying of sand in the State by the private agencies would be stopped. GoTN undertook the quarry operations to ensure:

- elimination of indiscriminate and unscientific sand quarrying;
- un-interrupted availability and supply of sand in an orderly manner to the common public;
- availability of the sand at affordable prices to common public thereby reducing the cost of construction; and
- augmentation of State Government revenue.

GoTN empowered<sup>60</sup> the Water Resources Department of Public Works Department, (PWD) for carrying out sand quarry operations in the State. GoTN prescribed (July 2006)<sup>61</sup> transportation of two units (5.66 cum) of sand per lorry trip besides ensuring prevention of water table depletion and preventing hazards to ecology/environment near river. GoTN subsequently permitted (May 2008) transportation of three units (8.49 cum) of sand per lorry.

GoTN constituted (November 2009) Taluk Level Task Force (TLTF) and District Level Task Force (DLTF) comprising of officials from Departments of Revenue, Geology and Mining (G&M), Police, Transport, PWD and Forests to make frequent/surprise checks in the mining/quarrying field, and on vehicles transporting minerals so as to arrest illicit quarrying/ mining/ transportation of minerals.

GoTN prescribed (February 2011)<sup>62</sup> the detailed procedure for storage and transportation of sand through stockyards. GoTN authorised (September

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<sup>58</sup> High Level Committee constituted in G.O.2D No.46, Industries Department dated 25 September 2002. Committee consisted of Geologists, Environmentalists and Scientists.

<sup>59</sup> G.O. Ms No.95, Industries Department dated 1 October 2003.

<sup>60</sup> G.O. Ms. No. 451, Public Works Department dated 3 October 2003.

<sup>61</sup> G.O. Ms. No.110, Public Works Department dated 6 July 2006.

<sup>62</sup> Rule 38 C inserted vide G.O.Ms.No.32, Industries Department dated 11 February 2011.

2012)<sup>63</sup> Assistant Engineer or Assistant Executive Engineer of PWD to authenticate transport permits issued for transportation of sand from quarry and sale slip issued by stockyard licencees, for the sale of sand.

It was observed that 16,178 vehicles were seized for transporting sand without valid documents during the years 2014-15 to 2016-17 involving a quantity of 36.11 lakh lorry loads which was valued at ₹ 302.55 crore.

### 3.2.2 Scope and Methodology

There were 62 sand quarries functioning in the three Regions<sup>64</sup> of the State as on 31 May 2016. Of these 62 quarries, 11 quarries were in possession of operational licence in the three years period (2014-15 to 2016-17) and others less than three years. Four<sup>65</sup> out of 11 quarries in Chennai Region and Mayanur quarry in Tiruchirappalli Region, where sand was transported in lorries, were selected for detailed scrutiny. The sales made by the Kodikalam stockyard in Chennai Region was also selected for detailed scrutiny. The transport permits issued by PWD from five quarries and sale slips issued by the Kodikalam stockyard was collected and a database created. Besides the data, the records of the PWD and G&M Departments, Google Earth Maps, Vehicle Registration Data of State Transport Department and Ministry of Road Transport and Highways (MoRTH) were also analysed with reference to the TNMMCR, Government orders, Environmental Clearance by State Level Environment Impact Assessment Authority (SEIAA), Tamil Nadu Pollution Control Board (TNPCB), instructions issued by GoTN and approved Mining Plans. We also engaged an external consultant, Centre for Aerospace Research, Madras Institute of Technology, Chennai for quantifying the extent of area and volume of mining of sand in Neyvasal quarry using Unmanned Aerial Vehicle based mapping technology. The audit findings were discussed with the Principal Secretary to Government, Public Works Department in the Exit Conferences held on 04 October 2017. We acknowledge the co-operation extended by the Department in providing us the necessary records and information.

### 3.2.3 Planning

Government of India, Ministry of Environment notified (September 2006) that projects and activities relating to mining of minerals with lease area of less than 50 ha required prior Environmental Clearance from SEIAA and for mining in lease area exceeding 50 ha by Ministry of Environment and Forests, Government of India (MoEF). Rule 41 of TNMMCR stipulated the requisite conditions for obtaining mining licence from the District Collector *viz.*, preparation of Mining Plans by the recognised and qualified persons, approval of Mining Plan by G&M Department, grant of Environmental Clearance from the SEIAA, etc.

The licences for four new quarries in Cuddalore District and one new quarry in Karur District were granted by the respective District Collectors between

<sup>63</sup> G.O. Ms.No.158, Industries Department dated 4 September 2012.

<sup>64</sup> Chennai (31), Madurai (2) and Tiruchirappalli (29).

<sup>65</sup> (i) Neyvasal - 19 ha (ii) Edaicheruvoi - 6.31.80 ha (iii) Pennadam - 9.87.40 ha and (iv) Vasistapuram - 5.39.30 ha.

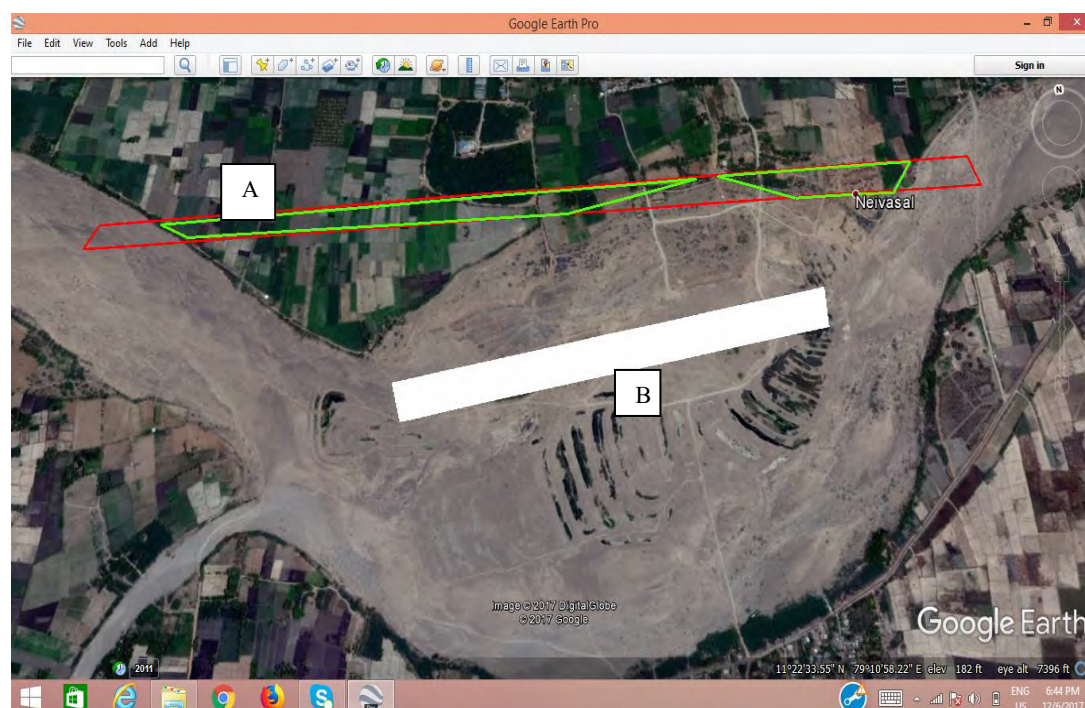
March 2014 and June 2015<sup>66</sup> based on the approved Mining Plans and Environmental Clearances.

The proposed area of mining with reference to the geographical co-ordinates of latitude and longitude was detailed in the Environmental Clearances and the approved Mining Plans of these five quarries. The correctness of the approved geo co-ordinates was verified with reference to the Google Earth map and the same revealed the following:

### **3.2.3.1 Correctness of the approved geo co-ordinates**

SEIAA issued (February 2014) Environmental Clearance for mining in an area of 19 ha in Neyvasal quarry. We plotted the latitude and longitudinal co-ordinates shown in the approved mining plan on the Google Earth map as shown in **Figure No. 3.1**.

**Figure No. 3.1: Mining area as per mining plan and actuals**



**A –The area arrived as per the geo co-ordinates of the approved mining plan.  
B - The area as per drawing in the approved mining plan.**

As may be seen from the above:

- The actual area of mining differed from the area arrived on the basis of geo co-ordinates furnished in the approved mining plan.
- The measurement of area of geo co-ordinates represented in the approved mining plan worked out to 15 ha as against the area of 19 ha approved for the sand quarry in the Mining Plan and Environmental Clearance.

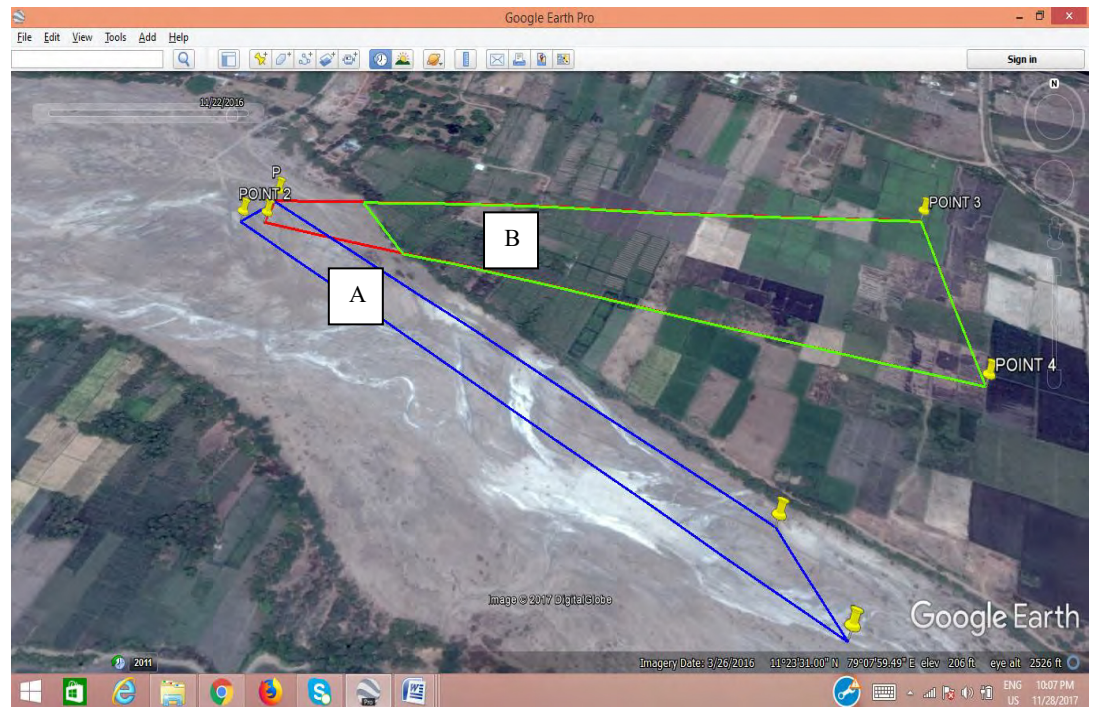
<sup>66</sup> Neyvasal and other quarries were approved in March 2014 and Mayanur quarry in June 2015.

- A cross verification of the geo co-ordinates available in the mining plan with the google earth map also revealed that 10.77 out of 15 ha were not in the river bed. The area as per geo co-ordinates represented private patta lands and only 4.23 ha was in the river bed.

Similarly, MoEF issued (May 2015) Environmental Clearance for mining in an area of 452.31 ha for Mayanur cluster quarry<sup>67</sup>. The area calculated on the basis on the geo co-ordinates represented in the Environmental Clearance worked out to 403 ha only.

Further, SEIAA issued (February 2014) Environmental Clearance for mining in an area of 5.39 ha in Vasistapuram quarry. The geo co-ordinates indicated in the approved mining plan and the Environmental Clearance of SEIAA for the Vasistapuram quarry were different as shown in **Figure No. 3.2**.

**Figure No. 3.2: Geo co-ordinates in mining plan and Environmental Clearance**



- A- Blue polygon indicated area for quarrying as per geo co-ordinates in mining plan**  
**B- Green and Red polygon indicated area of quarrying as per geo co-ordinates in the Environmental Clearance.**

It may be seen from the above that the area approved for quarrying of sand as per the Environmental Clearance did not fall in the river bed but in private patta lands.

Thus, the correctness of the geo co-ordinates referred to in the mining plan or Environmental Clearance were not verified by G&M Department or SEIAA at the time of approval of the mining plan or Environmental Clearance respectively. Based on these plans with incorrect geo co-ordinates, licence for operation of sand quarry was issued by District Collector resulted in failure of

<sup>67</sup> Mayanur cluster quarry included Mayanur, Sriramasamudram and silaipillaiyaputtur quarries with the total area of 452.31 ha.



system to ensure the same area of operation of sand quarry, as area of mining differed in approvals of various Authorities.

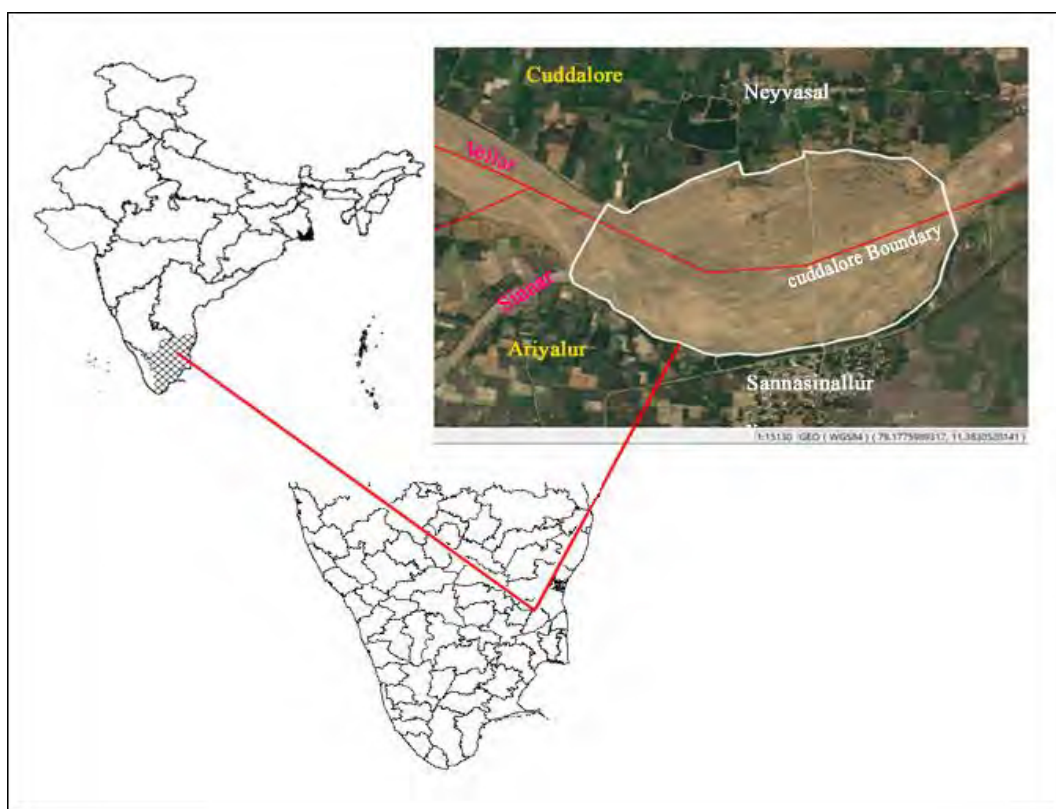
Superintending Engineer (SE), PWD, Vellar Basin Circle stated (September 2017) that the quarry coordinates were recorded manually based on physical measurement of the area using chain links. The reply is not acceptable as the Department failed to verify the correctness of the geo co-ordinates represented in the approved mining plan and Environmental Clearance to ensure mining operations in the permitted area.

### **3.2.3.2 Sand quarrying in Neyvasal**

GoTN permitted (January 2011)<sup>68</sup> District Collectors for restricted and judicious use of not more than two poclains in each of the quarry sites in the State and instructed that poclains should not be used between 7 p m and 6 a m. Rule 38 C of the Tamil Nadu Minor Mineral Concession Rules, 1959 envisaged that Assistant Engineer or Assistant Executive Engineer of PWD were empowered to authenticate transport permits and sale slips used for transportation of the sand from quarries and stockyards respectively. District Collector instructed (November 2013) that the quarry operations should be undertaken in the presence of Assistant Engineer, PWD or higher authorities.

The Vellar river flowed through Neyvasal village of Cuddalore District and Sannasinallur village of Ariyalur District as depicted in **Figure No. 3.3**. The sand quarry licence for the Neyvasal quarry was approved (March 2014) by the District Collector for an area of 19 ha for excavation of sand not more than

**Figure No. 3.3: Vellar river in Cuddalore and Ariyalur district**



<sup>68</sup> G.O.D.No.7, Industries Department dated 11 January 2011.

one metre from the bed level. District Collector also permitted for utilisation of two poclains in the quarry and for transportation of sand through lorries as against bullock carts approved initially.

A Joint Inspection of Neyvasal quarry was conducted in August 2017 with the officials of the PWD, G&M and Revenue Department, which revealed extensive mining in additional areas and excessive depth. Considering the same, a consultant was appointed to ascertain the extent of mining in the Neyvasal quarry area of Vellar river using Unmanned Aerial Vehicle (UAV) technology. The consultant obtained the village maps with survey numbers, collected Ground control points from the Survey of India Department, geo referenced latitude and longitude co-ordinates of the area. The actual area of sand mining including the depth of mining in the Vellar river of Neyvasal sand quarry and adjacent areas was observed by the consultant through UAV images. The data received from the UAV images was processed and the actual volume of sand mined from the area was calculated by the consultant using different software modules like Global Mapper, Virtual Surveyor, Bentley Context Capture and Digital Terrain Model.

It was seen from the details available in the Google Earth Map that four to seven poclains were used (February 2015 to February 2017)<sup>69</sup> for sand quarry operations on atleast three occasions in Neyvasal quarry in deviation of the orders of the District Collector and GoTN as indicated in **Figure No. 3.4**.

The operation of the poclains was also undertaken at 5 a m at Neyvasal quarry well before the permitted time. This indicated inadequate monitoring in the sand quarrying operations by the PWD and the District Collectors.

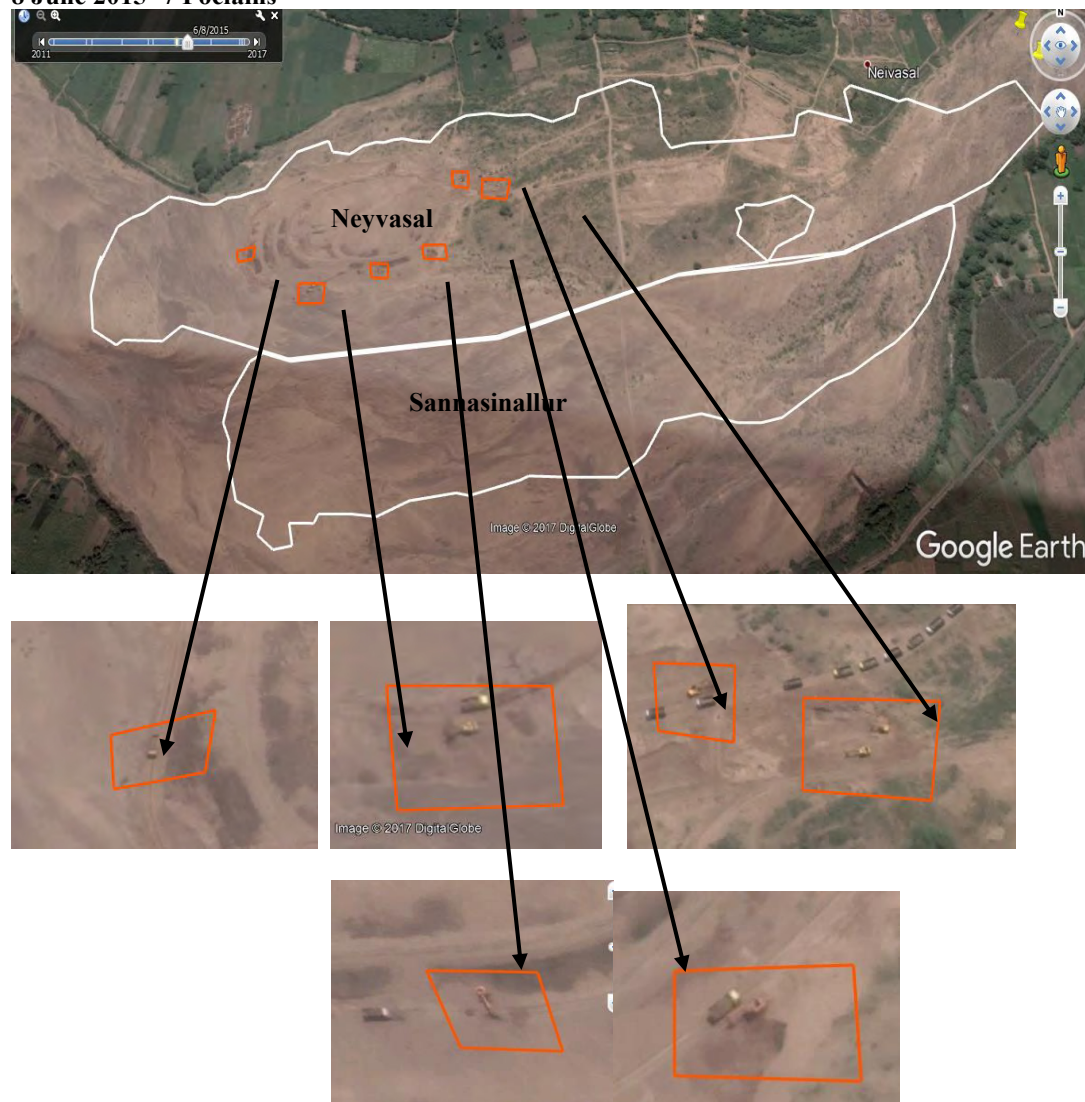
This was also substantiated from the site inspection report of Neyvasal quarry carried out by the Tamil Nadu Pollution Control Board during July 2015 which reported usage of eight poclains at the quarry site.

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<sup>69</sup> Five poclains were deployed on 18 February 2015; seven poclains were deployed on 8 June 2015 at 5 a m; and four poclains were deployed on 23 February 2017 at 5 a m.

**Figure No. 3.4: Operation of poclains in Neyvasal quarry**

8 June 2015 -7 Poclains



### **Excess quarrying of sand**

The report of the consultant detailed that the quarrying operation at Neyvasal quarry extended beyond the Cuddalore district and undertaken in the adjacent Sannasinallur village of Ariyalur district. The extent of mining and the volume of sand mined in the quarry were as detailed below:

- As against the approved area of 19 ha, mining was undertaken in the area admeasuring 42.37 ha in Neyvasal and 26.44 ha in adjacent Sannasinallur village in the Vellar River. We also observed that no sand quarrying operation was permitted by PWD or District Collector after 2011 in Sannasinallur village.
- The google map of the Sannasinallur village in Vellar River as on 25 March 2014 and the UAV mapping of the area during November 2017 are shown in **Figure Nos. 3.5 and 3.6** respectively. These images substantiated that sand mining was carried out in areas of Sannasinallur village without approved mining permit.



Figure No. 3.5: Google image View as on – 25 March 2014

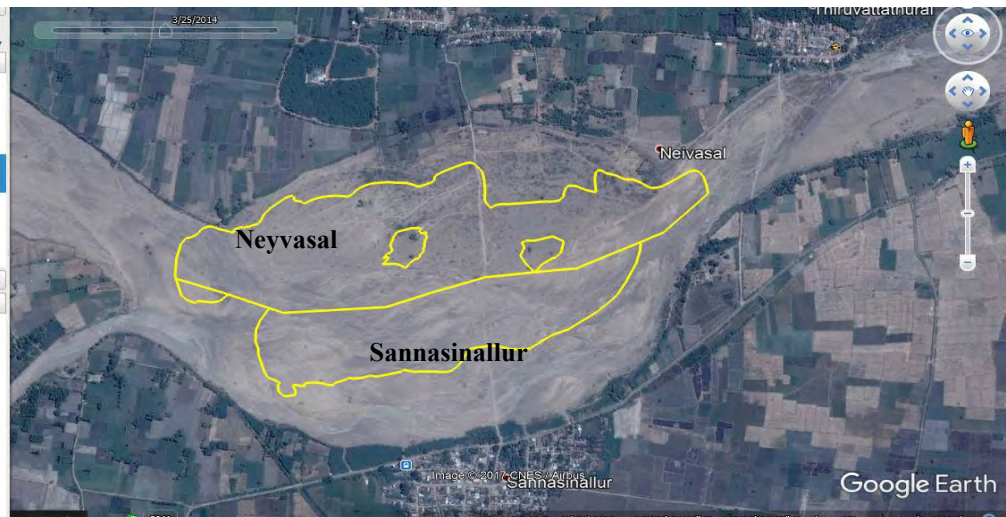


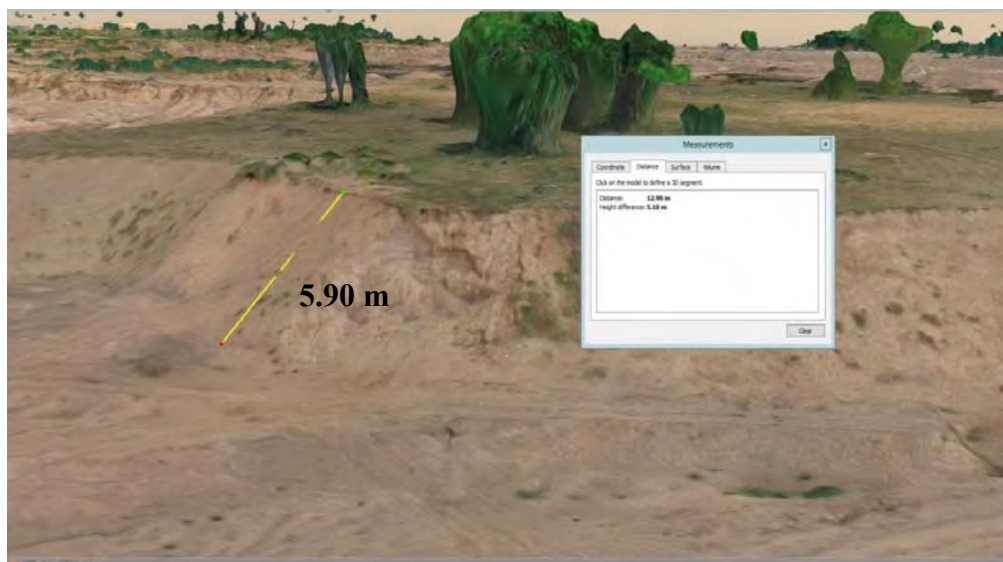
Figure No. 3.6 UAV Ortho Image as on – 03 November 2017



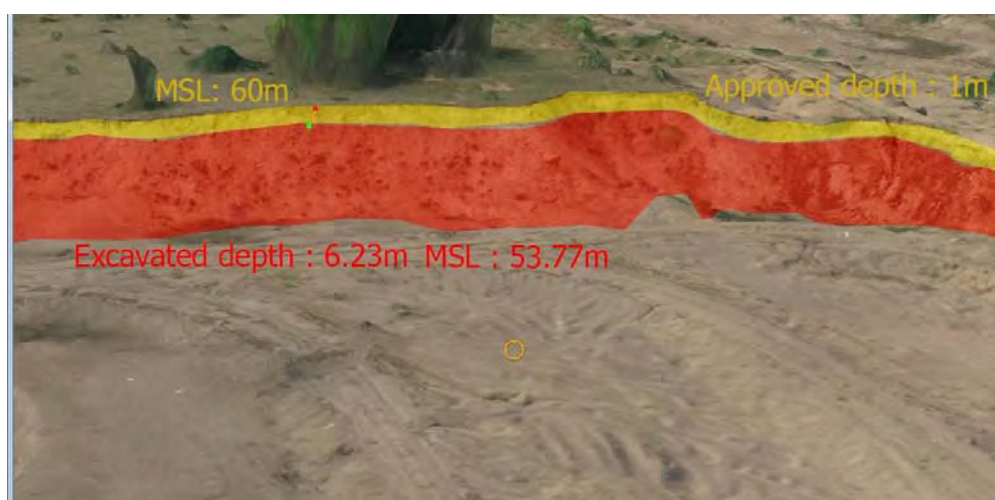
- It was reported by the consultant that the depth of sand quarrying undertaken was more than the permitted depth of 1.00 m. It was reported that the actual depth of quarrying ranged to a maximum of 6.5 m (Figure Nos. 3.7 and 3.8) with reference to the river bed level.



**Figure No. 3.7: 3D image showing height difference 5.90 m**



**Figure No. 3.8: 3D image showing height difference 6.23 m**



- The consultant reported the volume of sand excavated from the site using the data processed based on actual depth of the individual pockets of mine. The volume of sand mined was reported after analysing the data with reference to the four models adopted. We relied on the volume of sand calculated on the basis of the Bentley Context Capture Method using the UAV data as it was the lowest. The total volume of sand excavated in Neyvasal and its adjacent Sannasinallur village worked out to 13.34 lakh cum as against the permitted quantity of 1.90 lakh cum. The additional volume of sand mined was 11.44 lakh cum valued at ₹ 21.02 crore adopting the PWD ex-quarry rates of ₹ 1,040 for 5.66 cum of sand. The value of additional quantity of 11.44 lakh cum of sand worked out on the basis of stockyard rate of ₹ 3,100 for 5.66 cum was ₹ 62.66 crore.
- Tamil Nadu Minor Mineral Concession Rules provides for levy of penalty for transportation of sand without valid transport permits at the rate of ₹ 25,000 per lorry load. The additional quantity of 11.44 lakh

cum of sand reported as excavated at the quarry site worked out to 2,02,120 lorry loads (5.66 cum per lorry load with two unit capacity). The penalty leviable for transportation of the additional quantity of sand without valid transport permits worked out to ₹ 505.30 crore<sup>70</sup>.

- Incidentally it was observed from the test check of records of Cuddalore District that the total value of sand seized by the enforcement authorities during 2014-15 to 2016-17 was meagre ₹ 3.11 lakh and the penalty collected was ₹ 1.75 crore.
- The consultant also observed that excess excavation of sand resulted in topographical changes in the river bed of Vellar river leading to ground water changes and degradation of ecology.

Thus, the District collector and PWD failed to comply with the GoTN instructions of using the poclains judiciously and to ensure removal of sand in the approved area of quarry resulting in excess utilisation of poclains and removal of additional quantity of sand as observed from UAV technology besides loss of revenue of ₹ 21.02 crore calculated at PWD rates.

Government agreed (September 2017) in the Exit Conference that more poclains might have been used for levelling purpose. The reply is not tenable as the directions of Government prohibited use of more than two poclains in the sand quarry site. Government did not furnish reply regarding additional area of sand mining and excess removal of sand.

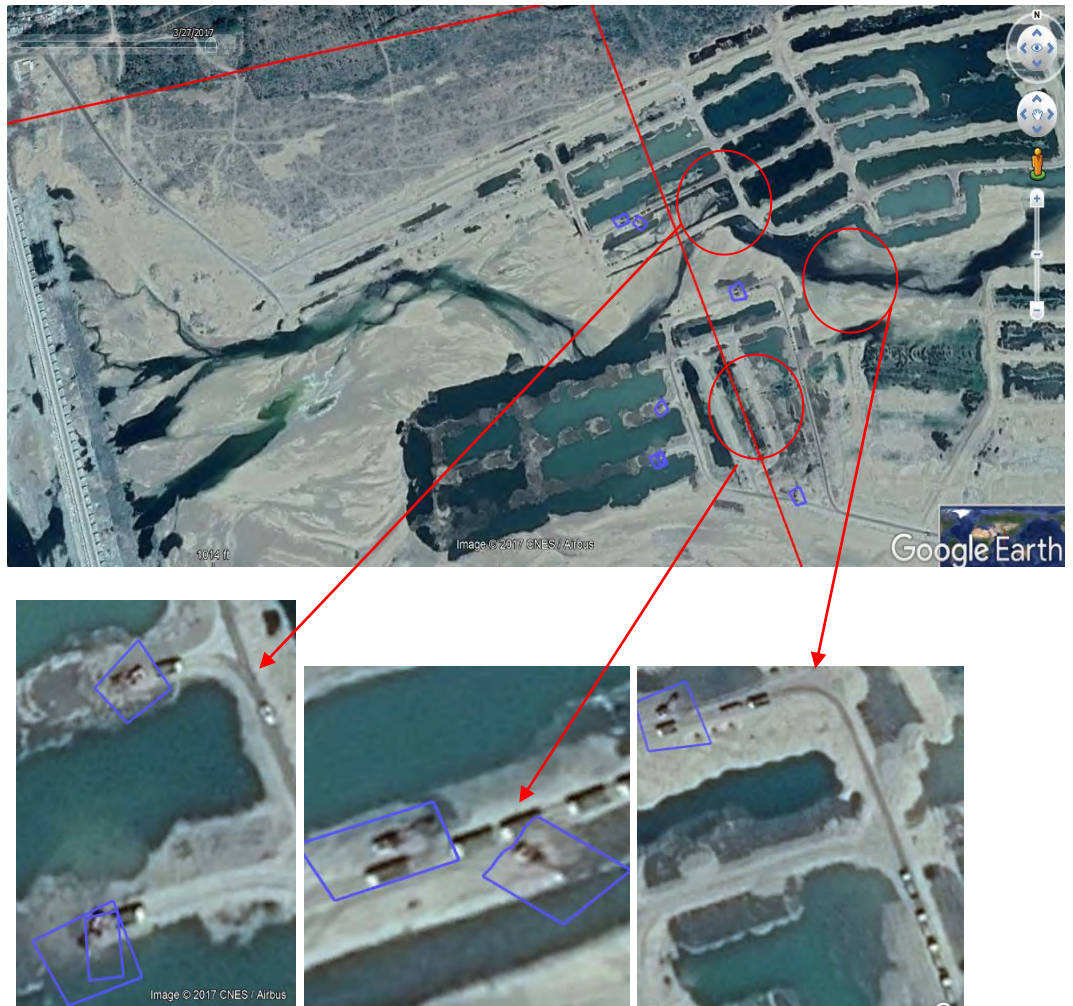
### **Sand quarrying in Mayanur**

District Collector, Karur District permitted (June 2015) operation of sand quarry at Mayanur village based on the approved mining plan and Environmental Clearance from MoEF. We also observed that six to 11 poclains were used in the Mayanur sand quarry on three occasions during February 2016 to April 2017 as observed from the Google Earth map and illustrated in **Figure No. 3.9**.

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<sup>70</sup> 2,02,120 lorry loads x penalty of ₹ 25,000 per lorry load = ₹ 505.30 crore.

**Figure No. 3.9: Operation of poclains in Mayanur**



#### **3.2.4. Operation of sand quarries**

Rule 38 C of the Tamil Nadu Minor Mineral Concession Rules, 1959 envisaged that Assistant Engineer or Assistant Executive Engineer of PWD were empowered to authenticate Transport Permits and sale slips used for transportation of the sand from quarry and stockyard respectively. District Collector instructed (November 2013) that the quarry operation need to be in the presence of Assistant Engineer, PWD or higher authorities.

The details of transport permits issued by the Department for the five test checked sand quarries from December 2014 to March 2017 are indicated in **Table No. 3.7.**



**Table No. 3.7: Details of transport permits issued by the Department**

(Figures in numbers)

Name of the quarry	Transport permits analysed	Permits signed by sub-ordinates	Permits without any signature	No. of days of quarry operation	No. of working days during which permits were signed by sub-ordinates	Per centage
Neyvasal	32,901	31,706	114	628	571	90.92
Pennadam	9,743	9,243	-	53	49	92.45
Edaicheruvoi	7,069	3,402	1	30	19	63.33
Vasistapuram	5,772	3,590	-	41	16	39.02
Mayanur	49,673	-	-	369	--	--
<b>Total</b>	<b>1,05,158</b>	<b>47,941</b>	<b>115</b>			

(Source: Details furnished by the Department)

As seen from the above:

- We observed that 55,485 transport permits were issued in four test checked quarries<sup>71</sup>. Of the same, only 7,429 permits were authenticated by Assistant Engineers in charge and the 47,941 permits were issued by sub-ordinates of Assistant Engineers indicating deficient authentication.
- The authentication by the sub-ordinate officers on 571 days of quarry operations indicated that the authorised officer was not available to ensure removal of correct quantity of sand from the quarries.
- We also observed that only one Assistant Engineer was in charge of three sand quarries<sup>72</sup>.
- It was seen from the office copy that 114 permits were issued without the signature of any official of PWD in Neyvasal quarry indicating movement of sand outside the quarry area without valid permits.

Government accepted and stated (November 2017) that the authorised officers were assigned additional responsibilities of supervision of other quarries and works. It was also stated that exclusive offices to monitor the mining were formed. The fact, however, remains that absence of the authorised officer in the sand quarry was in violation to the licence conditions and led to removal of quantity of sand from the Neyvasal quarry as detailed in **Paragraph No 3.2.3.2.**

<sup>71</sup> Neyvasal (32,901), Pennadam (9,743), Edaicheruvoi (7,069) and Vasistapuram (5,772).

<sup>72</sup> Neyvasal, Edaicheruvoi and Vasistapuram.

### **3.2.4.1 Transportation of sand**

Rule 38 of TNMMCR envisaged utilisation of non-transferrable transport permits printed in the prescribed format containing the requisite details *viz.*, quarry, quarry permit, vehicle number, time of issue, name of the consignee, destination, validity period of permit, etc.

The verification of the transport permits issued for the movement of sand in test checked five quarries revealed the following:

- The transport permits were printed in the prescribed format in respect of Mayanur quarry and the other four quarries adopted different formats. The formats used by other quarries did not have the required details *viz.*, name of the consignee and validity period of the permit.
- It was seen that 1,05,158 permits were issued in five test checked quarries during December 2014 to March 2017 and these permits were utilised for transportation of the sand in 19,021 vehicles. The registration details of 7,906 out of 19,021 vehicles were cross verified with the database of State Transport Department and MORTH. The verification revealed that 3,381 out of 7,906 vehicles numbers (42.76 *per cent*) were not registered as transport lorries but as two wheelers, auto rickshaws, cars, etc. and PWD issued 8,714 transport permits to these 3,381 lorries for transportation of sand. The registration numbers of 445 out of 7,906 vehicles were not available in the database of the State Transport Department or MoRTH indicating possible movement of sand through lorries with fictitious registration numbers for which 2,625 transport permits were issued.
- It was seen that the time required to reach the declared destination was recorded in the transport permits issued to the consignees. We observed that 135 transport permits were issued to vehicles bearing the same registration numbers either at the same time (30 numbers) or within a time gap of one to ten minutes (105 numbers) even though the permits indicated the time required for the declared destination as one to three hours.
- Similarly, a cross verification of the registration details of the vehicles transporting sand through sale slips from Kodikalam stockyard with the database of State Transport Department or MoRTH revealed that out of 1,500 vehicles, 164 vehicles were found to be motor cycle, cars etc.

Government agreed (September 2017) that there was no mechanism to verify the genuineness of the vehicle registration number at quarry site. It was also stated that the re-entry of the vehicles in short gap could not be scrutinised at site with limited manpower. The fact, however, remains that these system deficiencies resulted in partial supervision of removal of sand from the approved sand quarries leading to possible removal of sand without valid documents.

#### **3.2.4.2 Non-compliance of instructions**

In order to curb illegal mining/transportation of minerals, GOI issued (January 2010) instructions for affixing holograms on the permits issued to the transport vehicles by the State Governments. Accordingly, Commissioner of Geology and Mines issued instructions (November 2010)<sup>73</sup> to affix holograms on the Transport Permits issued by the PWD for transportation of sand for curbing illegal mining and transportation of minerals in the State.

We observed that PWD did not initiate action to procure holograms from the Government press to affix on the transport permits despite issue of 1,05,158 permits for transportation of sand in the test checked five quarries during the year 2014-15 and 2016-17.

Government accepted (November 2017) that usage of holograms was not implemented in any of the sand quarries in the State. The fact, however, remains that GoTN did not undertake adequate steps for curbing illegal mining and transportation of minerals despite instructions from GOI.

#### **3.2.4.3 Loading of sand in lorries**

GoTN permitted (May 2008)<sup>74</sup> loading and transportation of sand upto three units (8.49 cum) based on the provisions of Motor Vehicle Act, 1988. High Level Committee recommended (September 2008) for encouraging the sale of sand as three units to rule out the possibility of loading excess units but charging for lesser units. GoTN instructed (September 2008) the field officers to load the sand to the maximum capacity of the lorry subject to the relevant provisions of Motor Vehicle Act, 1988.

We obtained the carrying capacity of 4,080 lorries used for transportation of sand from the State Transport Department and MoRTH. An analysis of the data revealed that 597 out of 4,080 lorries were issued transport permits for transporting two units (19,220 permits) though the carrying capacity of these vehicles exceeded two units.

Incidentally, it was observed that 49,673 transport permits were issued by Mayanur quarry for transportation of sand for three units (8.49 cum) and the permits were also authenticated by the Assistant Engineer of the quarry.

Thus, absence of authorised officer at the quarry site also resulted in non-monitoring of the actual quantity of sand loaded in the vehicles with higher carrying capacity as instructed by the Government.

Government replied (November 2017) that the loading of sand in the vehicle was based on the quantity for which paid and also the carrying capacity of the vehicles. The reply is not acceptable as the carrying capacity of the vehicles indicated by audit was more than two units as against the charges received for two units, besides, it was in violation of the instructions of the Government.

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<sup>73</sup> Commissioner of G&M Department Proceedings dated 12 November 2010.

<sup>74</sup> G.O.Ms.No.178, Public Works Department dated 31 May 2008.



#### **3.2.4.4 Non-achievement of the objective**

Based on the recommendations of the High Level Committee, GoTN banned the quarrying of sand in the State by the private agencies. Sand quarrying was undertaken by PWD to ensure un-interrupted availability and supply of sand at affordable prices to common public thereby reducing the cost of construction.

In this regard, we observed the following:

- In deviation to the objective, GoTN permitted operation of stockyard by private persons from February 2011. It was seen that 32,901 transport permits issued (December 2014 to March 2017) from Neyvasal quarry comprising of 65,802 units of sand was transported to the Kodikalam stockyard for sale to the ultimate consumers. There was no direct sale of sand to the ultimate consumer from sand quarry during the period.
- Sale slips issued in the Kodikalam stockyard contained the vehicle number and the name of the driver and it also did not reveal the details of the ultimate consumers to ascertain the genuineness of the transaction.
- The sale slip did not indicate the sale price of sand to ensure the sale of sand at affordable prices to the common public.

An analysis of 32,901 transport permits and the sale slips issued from the stockyard revealed the following:

- The value of 35,051 units of sand purchased by Kodikalam stockyard from the PWD quarries at the rate of ₹ 520 per unit was ₹ 1.82 crore. The sand was sold to the consumers at a price of ₹ 1,550 and 1,650 per unit of sand during the month of December 2016 and January 2017 respectively as observed by DLTF. A cross verification of the sales details of the stockyard with the Tax returns filed with the Commercial Taxes Department for the period from January 2015 to May 2016 revealed that sale value of sand made was reported as ₹ 8.09 crore.

Thus, the abnormal variation in the value of sand purchased from the PWD and the sale value reported to the Commercial Taxes Department by the stockyard operator indicated non-achievement of the objective of the Government to supply sand to the common public at affordable prices.

Government replied (November 2017) that PWD did not have control over operation of stockyard. The reply is not acceptable as GoTN instructed (June 2015) for inspection of sand stockyards by PWD authorities on fortnightly basis.

#### **3.2.5 Monitoring**

GoTN constituted (November 2009)<sup>75</sup> Taluk and District Level Task Force besides State Level Appellate Forum (SLAF) (February 2015)<sup>76</sup> to conduct surprise checks for prevention of illegal sand mining/sand transportation.

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<sup>75</sup> G.O.No.135, Industries Department dated 13 November 2009.

<sup>76</sup> G.O.No. 27, Industries Department dated 17 February 2015.

District Level Task Force need to meet once in a month to discuss illegal quarrying/mining/transportation, damages caused to the environment and send a report to SLAF once in two months. SEIAA mandated submission of replenishment Report, Mine Closure Plan after the closure of the quarry and digital processing of the entire quarry site using remote sensing technique for monitoring the change of river course.

We observed that no action was taken to prepare Annual Replenishment Report, Mine Closure Plan and digital processing through remote sensing technique for the four selected quarries resulting in inadequate monitoring despite directions of SEIAA.

It was seen that the State Level Appellate Forum met four times as against the requirement of 12 meetings for the years 2015-16 and 2016-17. Absence of periodical meetings indicated partial monitoring of the work executed by the District Level Task Force.

#### **3.2.5.1 Non-submission of Compliance Report by PWD**

Clause 10 of Environment Impact Assessment Notification September 2006 stipulated submission of half-yearly compliance report by the project management to the SEIAA every year as post environment clearance monitoring. It was also envisaged that the compliance reports submitted by the project management were public documents and to be displayed in the website of the Regulatory authority, SEIAA. It was, however, observed that PWD failed to submit half-yearly compliance reports to SEIAA to ensure post environment clearance monitoring.

#### **3.2.6 Conclusion**

The sand quarry operations in the State revealed that the Department failed to verify the correctness of the geo co-ordinates available in the mining plan or Environmental Clearance at the time of approval of the mining plan or Environmental Clearance. It was also seen that the licences for operation of sand quarries were issued by District Collectors based on these incorrect geo co-ordinates. The Department failed to comply with the instructions of Government regarding judicious use of the poclains and to ensure removal of sand in the approved area of quarry resulting in excess utilisation of poclains and removal of additional quantity of sand as observed from UAV technology resulted in loss of revenue of ₹ 21.02 crore calculated at PWD rates. Major deficiencies in issue of transport permits and sale slips, non-ensuring authenticity of vehicles and end users, increase in recurrence of illicit quarrying as evidenced by seizure of vehicles/sand, deficient supervision, absence of monitoring hampered the objectives of elimination of indiscriminate and unscientific quarrying. This also led to non-achievement of the objective of supply of sand to consumers at affordable prices and prevention of degradation of ecology.

**3.2.7 Recommendation**

Government may ensure compliance of Rules/procedures framed for the purpose in mining activities, to ensure adoption of modern technology and better supervision and monitoring to achieve its intended objectives.





लोकहितार्थ सत्यनिष्ठा  
Dedicated to Truth in Public Interest

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*This Paragraph is an excerpt from the Audit Report No.7 of 2017 - Economic Sector Government of Tamil Nadu. The full Report can be accessed through <https://cag.gov.in/en/audit-report/details/45909>*